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A HAUNT OF TEUTONIC KNIGHTS.

WHAT a difference it does make, he may have said to himself, whether you are a heathen with no rights to anything but hell-fire, or, on the other hand, a champion approved by society and licensed by the Christian church—an exterminating angel, in fact, with vested rights not only in your own person, property and land, but in the land, property and persons of the heathen!

Thus may have mused Kynstud, chief of pagan Lithuanians, as he sat in his cell at Marienburg on the Nogat with two sentries just outside the door, a prisoner of the Order of Teutonic Knights after one of the fiercest battles in the Baltic crusades. As if it had been the nineteenth instead of the fourteenth century, and the plains of the Oder, the Vistula and the Memel had been Central Africa—on the plea that their enemies were heathen the pious brothers of the Order had for the past century and a half levied war on the Russians, Pomeranians, Livonians, Lithuanians and Poles, killed or driven off their cattle, ruined their crops, cut down their orchards, burned their villages and towns, and forced the captives to build castles and fortify seaports in order that German settlers should be protected against the earlier owners of the land.

And what land was it? Well, it had a respectable antiquity in the middle ages, for it had been known, hazily 'tis true, to the Greeks and Persians and Phœnicians.

It is the broad land of water courses, forests and swamps, of swans, storks, cranes and falcons. In classic phrase it is the region where Kuknos the dotting friend watched Phaëton scale the sky in his father's chariot, saw him fall from heaven, and grieved thereat so grievously that Apollo changed him into the dirgeful swan, whilst his sisters, struck with a double sorrow, turned slowly into poplars or willows, and their tears falling into the waters of the Eridanus of the North congealed to drops of amber.

It is the great and only amber country. The old legend of the

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Italian stream Eridanus as a source of amber was but a mistake for the river that falls by several branches into the Baltic, instead of that which enters the Adriatic. Up the Weichsel, or the Nogat if you will, for they are different branches of the same stream, passed the ships of the Phoenicians on their way back from the north, bearing the amber of the Baltic strands to Greece and Persia and India. But a greater, weightier trade than that of amber throve then, and throve in the middle ages, up and down the great rivers of Russia—the trade in slaves. And this trade in human beings was flourishing still when



MARIENBURG.

General View from the West.

Prince Kynstud the Lithuanian, in the year of Our Lord 1360, sat pondering how to escape from the Marienburg, chief chapter house of the Teutonic Order in Prussia.

The combat between the Order and the wild Lithuanians seemed a very unequal one, since the knights were in possession of all the ideas as to military matters new in Europe, ideas which had been learned or learned afresh in the last crusades, after the Order, along with other crusaders, had been thoroughly drubbed and driven out of Egypt and Palestine by the Saracens. It was then the brethren sought easier victims on the Vistula.

Moreover the Order had been long in Venice, where it had watched the statecraft and commercial polity of the Venetians. Its chapters met in Sicily and France. They were merchant princes of great weight. At the courts of the Pope at Rome or Avignon they were

powerful through their ready cash; they were not less strong at the court of their suzerain, the Holy Roman Emperor. As knights hospitallers in the crusades, founders of leech houses and caretakers of wounded crusaders, they stood in great repute during most of that sinful, grasping, most Christian fourteenth century. French knights dying of wounds or the plague in Egypt had deeded them many



MARIENBURG.
St. Mary's Church.

farms, mills and chateaux, or they produced wills and deeds which purported to be such gifts and saw to it that their claims were allowed.

But they were also favored in other ways. Venturesome men and noble youths longing for the spurs of knighthood flocked from England, France, Germany and Austria to the standard of the High Master at Marienburg. Numbers, experience, discipline, the most perfect armor and at last the death-dealing blunderbuss with its infernal racket and leaden hail put the Teutonic Knights far above

the pagan Prussians and Lithuanians, armed for the most part with long and cross bow. Still, each year the latter managed to issue pretty regularly from their forests, swoop down on the farms and towns, carry castles by assault, and grappling with armies of knights, destroy them utterly. Then, as likely as not, they would go into camp without following up the advantage, heavy with booty of women, wine, food, horses and harness. Being prone to forget themselves in debauch, they would often be caught napping and put to the sword by a rally of the crusaders.

Fortunately for him, Prince Kynstud could not speak German, so they gave him as an attendant by day one Alpf, a baptized Lithuanian. Many were the talks they had together in that peculiar language, so unlike German or Italian, and even Polish or Vendish, still less like Esthonian or Finnish. One fine frosty night, after Alpf had left him and all in the castle save the sentries were asleep, Prince Kynstud moved aside a wardrobe in his cell, disclosing a great hole in the wall which he had gradually excavated. The remaining bricks on the outside were soon removed and he swung himself down through the opening into the moat by a rope which had been thoughtfully introduced. Beyond the moat was someone—no other than baptized Alpf, who, to the dismay of the knights, had taken literally the injunction of the gospel to succor those in distress. He held two horses, one of them the High Master's gray stallion; nay more, he had that august man's gray mantle with the black cross, and even his sword! Mounting quickly, thus disguised, Prince Kynstud and his savior rode to the east gate; Alpf gave the countersign and they were let out. Then Kynstud turned and on the point of the sword reached up to the sleepy gatekeeper a letter, bidding him deliver it next morning to the Marshall of the Order. Then they put spurs to their steeds.

The letter in Alpf's German read:

"To His Illustrious Highness, the High Master Weinrich von Kniprode, greeting:

"This is to thank you for the hospitality shown me at Marienburg, and to say that if ever I have a chance to return the kindness, I shall see that you are more carefully watched than I have been.

"Kynstud."

Oddly enough, a similar escape had been successfully planned just 33 years before, namely in 1327, from the castle in Dublin, Ireland, by a native prince named Donall McMurragh. He had been elected provincial king by some Irish tribes in the hill country near Dublin and was surprised by the British while flaunting his flag within two miles of Dublin castle, on which at the time the banner of Edward, king of England, was displayed. An Anglo-Irishman named Adam de Nangle supplied him with tools and a rope, but, less lucky than the Lithuanian, de Nangle was caught and promptly hanged.

In other ways the parallel between Prussia and Ireland was sufficiently remarkable. There was the same hatred and intriguing of the clergy directed against the Teutonic Order in Prussia as against the Templars in Ireland. Although nominally the Poles and Prussians were Christians like the native Irish, yet pretexts in both countries were found to treat them as heathen. Their lands were parcelled out and they were expected to thank the knights for introducing to them the beauties of feudality and slavery. So to this day there is



MARIENBURG.

Entrance to Lower Castle with Statue of Frederick the Great.

great indignation in England that the native Irish did not welcome the Anglo-Norman civilization when they came to understand its working, but stuck to their Keltic laws, ways and tongue as pertinaciously as the Lithuanians and Old Prussians to theirs.

When Weinrich von Kniprode (1351) was raised to the high mastership at Marienburg, he held an eight-day festival. Among the entertainments was a recital in Old Prussian verses by one Rixel, a native bard, who sang the deeds of a heathen hero, Waidewul. The recital, I regret to say, met with jeers, because none of knights and burghers understood Old Prussic. In Ireland the descendants of the first conquerors had learned Irish; for, about a century and a half after the conquest, namely in 1329, the greatest bard of Ireland was killed in the train of the Anglo-Norman leader John de Bermingham. His name was Maolruanad mac Carroll, his nickname Cam-

shuillech or the squinter, which misfortune did not prevent him from being termed a "phœnix" in his art. As this bard was killed at the head of twenty disciples, it is plain that John de Bermingham had become a native chief even to the point of having with him his Irish poet-laureate with a tail of twenty minor bards.

The fertile but dreary lands to the east of Marienburg were seized, settled and defended as lawful property with the same imperturbable effrontery that the invaders of Ireland showed when they took the lands of the Irish. Prussia had been a province of Poland in the eleventh century under Boleslaus, first Christian king. I have not observed that modern English writers whose word carries weight are greatly proud of the deeds of the first conquerors of Ireland or seek to cloak their villanous performances with the terms religion, culture, reform. It is different with some German writers, who expatiate on the heroism and nobility of the Teutonic Knights in laboring so hard and so long to Christianize the heathen, without reflecting that a less selfish mode of imparting the truths of religion might have made the Lithuanians quickly converts, while enslavement, seizure of lands and cattle, killing with sword and spear, burning of captives alive and such mercies often roused doubts concerning the real meaning of Christianity in ingenuous pagan souls.

Originally the Teutonic knights were called into the lands near the Baltic by a certain Duke of Masovia, vassal of the Polish King, who were unable to subdue the pagan Lithuanians and Prussians. Soon they made themselves so powerful that they refused allegiance to their Polish suzerain, just as the Norman-Welsh adventurers called into Ireland by a petty king discovered that they might as well set up for themselves. At first the Order obtained the aid of Duke Svantepolk of Pomerania; it was with his aid that the Teutonic Knights in 1326 destroyed a fort near a place on the Nogat called Alyem; here Marienburg was built later in the century. But in 1338, twelve years later, they had quarreled with Svantepolk. They demanded for themselves the strictest obedience on the part of all conquered tribes, but when it came to obeying the same feudal rules on their own part, they set up claims to self-government which pleased neither the superiors of the Order in Austria, Germany and Italy, nor their religious chief at Rome. In Venice the Order was regarded askance, because it still had a foothold in the Levant. In France and at Rome the clergy found the knights inconveniently popular and rich. Rulers coveted their possessions; nor were they without violent rivals in Austria and Germany.

At first the Order treated the conquered Prussians with gentleness, demanding few taxes and posing for men of virtue beyond the ordinary, anchorites who had parted from the pomps of the world and the allurements of the flesh. Very soon, however, people awoke to

the fact that they had become slaves like the commons in France and Germany. In 1240, when they were asked to build castles, they rebelled. In that year, supported by their old enemy Svantepolk of Pomerania, they rose against the oppressors, introduced paganism once more and sacrificed the captive Germans to their old cruel gods of war, gods to whom unblemished men and women were agreeable, whether directly captured in battle, or seized in a raid; or bought in cold blood from the slave merchants for the purpose.



MARIENBURG.
Dormitory, Upper Castle.

More than half a century had elapsed since the advent of Teutonic knights under leaders of lower rank; yet no High Master had appeared at the head of the bands. The raids were directed from Venice or some German city; their chiefs were a Landmaster or a Marshal. Not till 1274 did Marshall Thierburg begin to build a castle at Alzem on the Nogat; in two years it was finished; but it was not till 1296 that Conrad von Feuchtwangen as High Master so much as visited the place. It was dedicated to the Virgin Mary and received the name of Marienburg. The Order had been driven from Acre in Palestine just five years before.

Six years later the High Master Gottfried von Hohenlohe came from Venice to organize victory and reform the Order; but the insolent knights soon taught him that they did not choose to be reformed. It is supposed that only in 1306 did a High Master take up

his abode at Marienburg, near which a small town had grown up for safety of the citizens against raids from Poles and Tatars, Lithuanians and Prussians, pirates from the Baltic and wild horsemen from the Russian steppes. Doubtless this Hochmeister would have delayed yet longer to take possession, had not the accusations of Popes, Kings and commons directed against the Knights Templar for "paganism, tyranny and hideous crimes, begun to be transferred to the Teutonic Knights. From that time forward the Order showed no little skill in playing off the Dukes of Poland against the Dukes of Lithuania.

Lithuanian folk stories recently collected by Leskien include a fable that fits very well the Order of Teutonic Knights in its dealings with Christian and pagan princes.

A farmer (*aina gaspadorius*) finds a dragon (*smákas*) caught under a fallen tree. The dragon promises him a fine reward if he lifts the tree. He does so, whereupon he is informed that he is to be devoured. To his expostulations the dragon answers: *Uz géra padáryma* (for a good deed) *tai vis* (there's always) *szlektu uzmóka* (evil paid). But the farmer begs to refer the case to three judges.

Having met and appealed to a dog, the latter answers:

"When I was young I kept the swine from my master's crops. Now I am old and useless my master has driven me away. Good deeds are always repaid with evil. Dragon, devour him!"

They meet a horse and the horse gives the same advice. Finally they meet a fox, who privately asks the man what he will give him if he saves his life. The man promises a fat goose, whereupon Master Reynard leads them back to the fallen tree, and on pretense of wishing to know exactly how the matter happened, induces the silly dragon to place himself as he was before. "Now," says Reynard, "your life is saved; where is my fat goose?"

The farmer takes the fox home in order to deliver to him the promised reward; but when he enters the house and tells his wife, the latter whispers: "You fool, take your gun and kill the fox!" As Master Reynard expires under the shot he has breath to say: "*Uz géra padáryma tai vis szlektu uzmóka*"—"a good deed is always repaid with evil."

That misgovernment which has been the lot of generations of Lithuanians in Russia, Poland and Prussia seems to have crystallized into this cynical little fable—a variant on well-known stories in the Arabian Nights and other folk tales. Some Lithuanians maintain that it reflects the situation to the present day.

It is five hundred and thirty-nine years since Prince Kynstud fled by dead of night from his jailers and by swimming a river escaped their sharp pursuit. Marienburg stands yet, cleaner, larger, sharper-edged, more brilliant in the sunlight than then. It is true

that the bridge of piles with a draw in the centre is not there, and the bridge gateways are not complete. There is no tête-du-pont over on the west bank. But there rise the high roofs and strange gables which tell the presence of the castle church with the big statue of the Virgin on its apse; there are the oblong square tower beside it and the middle castle advancing toward the river. Lancet and pointed-arch windows tell of the spread of Gothic from the valley of the Seine to this distant spot. Seen from the town or land side, the big Virgin on the apse looks stolidly out across the deep moat; her draperies and the niche in which she stands glitter with gold and colored mosaics of glass. The tall windows to right and left show that the choir is



MARIENBURG.

General View from the South across the Nogat.

lighted with stained glass of modern make. The moat runs about the upper, middle and lower castles, binding them together; yet the upper castle with its church and tower is cut off from the rest by a transverse dry moat in case the enemy should gain possession of the lower half.

At the northwestern end, down stream, is a green park before the principal entrance to the lower castle, where stands a bronze statue of Frederick the Great, the pedestal having at its four corners the figures of four High Masters. Little enough, however, did Frederick do for Marienburg. At the southeastern end, beyond the upper castle and its deep moat, begins the old town. Its main street,

called the Market, faced with arcaded house-fronts, runs broad and parallel with the river to the old town gate. All the Market is a delight to those who relish the picturesque, but especially the Rathaus and the "arbors," square enclosures before each shop or private dwelling, are pleasing to the antiquarian.

A very curious Catholic church, with a low, cut-off tower, its three equal naves showing separate in three low, arched roofs side by side, stands close to the north moat and turns the gables of its triple back to the river. It may be detected in the general view of Marienburg from the west bank, on the extreme right of the castle.

The west front of the castle, with its gables flanked by turrets, remind one of churches in Prussia, such as at Pasewalk and Stargard; indeed there is an odd ecclesiastical touch to the architecture of Marienburg which fits very well the anomalous position of the knights in the body politic. Among them were strictly religious members for the celebration of the offices; the majority, however, were not priests, but fighting men, who professed chastity, obedience and poverty, and while omitting to practice the same, expected the people to hold them in reverence as anchorites, whilst they indulged in war and commerce, plunderings and feasts, luxuries and the excesses of the camps.

In its architecture, however, the world carries off the palm from religion. The church does not count for much more than does the chapel common to royal palaces. The great lower castle shows its original purpose of stabling and lodging for hundreds of horses and pilgrims, as well as for granaries and hay-lofts. The round towers by the waterside, once guards of a vanished bridge, are for defense, and the battlemented advanced portion of the middle castle, questionable as its restoration in some regards may be, indicates well enough the sumptuous life of the oligarchs who feasted and played their games of chess behind its front, with royal and ducal guests to keep them company. In fine, Marienburg is the place of opulent rulers rather than the castle of stern converters of the heathen. The old Schloss at Berlin may offer a more imposing single mass; but it would be hard to find between the Rhine and the Memel a pile more varied and interesting its architecture than this haunt of the Teutonic Knights.

In certain account-books rescued from oblivion, we learn that the Tresslers or treasurers of Marienburg were thrifty, laborious souls. In the early days of the castle, say from 1300 to 1400, its hospitality was not so much called upon as later. On the other hand, it was only then that sagacious Hochmeisters had begun to realize what a mine of profit there was in the fame the Order enjoyed as a promoter of knighthood. Not only did men flock from western Europe, but gifts of money and arms came from the faithful. Notwithstand-

ing expensive raids and regular wars by land and sea, outlays for hosts of guests and princely sums spent in buying lands, the Order presently grew rich and peace-loving. The Hochmeister lent money to Polish and German nobles, gaining many enemies thereby. He made treaties with the Hansa towns; his galleys destroyed the pirates of the Baltic who levied tribute on commerce with Holland and England. His gifts went not only to Pope and Emperor, but foreign Kings. He even went so far, by hoarding grain, as to offer



MARIENBURG.

View of Lower Castle from River.

a very pretty mediæval precedent to modern capitalists who "corner" the grain market. It is true that German writers have much to say about the culture and civilization the Order brought to the benighted banks of the Vistula; it is also true that later on, when they were rich, poets and singers were encouraged, and schools were even founded at Königsberg and Marienburg. But it needs the robust optimism of a native to believe that the Teutonic Order did anything in the line of education which would not have been done much earlier and better had they never infested eastern Prussia with their particular form of piety for profit.

It is a singular and suggestive fact that during the ages which belong to chivalry, the knights at Marienburg entirely lacked a place for knightly exercise with arms. Nor in the surviving account-books is there mention of tournaments or feats of arms. They had

commanders of experience and hired soldiery, but there is no sign that swordsmanship flourished; even strategy seems at a low ebb. The wars were often mere plundering raids from either side in alternate years. Some real armies met—horse, foot and artillery; but they usually hammered away at each other until one got a panic and fled. An exception was the famous battle at Tannenberg, which practically ruined the Order.

Nor is there any sign that chivalry improved the position of woman. On the contrary, the Order was based on a low view of woman.

The pagan populations, which offered no great obstacle to the intrusion of the crusaders, perhaps believing that men with such professions must bring them relief from the constant strain of war, became restive when they found the nature of the civilization they really brought, and contrasted the acts of the cross-marked knights with the professions of their forerunners, the missionaries. What seems to have impressed them was the haughtiness of the Knights which sprang from the twin roots of godliness and feudal rank; and next to their haughtiness, their cruelty and lust. It is probable that cruelty and haughtiness were useful in keeping the half-civilized men of the plains in awe up to a certain point, until the overtaxed bow snapped.

Reminiscences of the Baltic crusaders can still be detected in the dramas or popular ballads of the Lithuanians. One runs thus:

1. Five brothers left on the meadow green,
To-morrow in the crusaders' hands.
2. When they captured us young men
They laid on our ankles the iron bands.
3. The iron bands they laid on our feet,
And drove us footsore to Tilsit town.
4. The crusade leader most unkind
Ordered them bring the green, green rods.
* * * * *
6. And when they beat us, began to flow
Our blood to the ground, and quaked the earth.
* * * * *
12. Thanks, O mother, for all your love,
And you, O father, for white loaf-bread.
* * * * *
14. But on the street a call is heard:
Protect the corpses of your sons,
15. Who lie unburied upon the ground,
Where dogs are tearing them foot and hand.

The Order was elaborately organized under a Hochmeister, who

at one time ruled over the whole of Prussia as well as the settlements in Austria and Germany. Next came the Grosskomthur or Count-General, who attended to the finances of the Order and received reports from chapters, castles and farms. At Marienburg itself the affairs of the castle and town and district villages and farms were managed by a Hauskomthur or Count of the House. Under him was the cellarer (Kellermeister) who watched the fermentation



MARIENBURG.

View of Upper Castle from the North or Town Side.

of wine in hundreds of casks ; for at the time there were many vineyards in Prussia planted with choice Italian stocks that yielded a wine whose fame reached England.

Then there were the armor master (Trappier), the millmaster (Korn or Mühlmeister), who saw to the harvesting and grinding of grain ; the gardener (Gartenmeister), the stablemaster (Marshall), the fishmaster, in whose purview were the carp ponds and fisheries ; the cattle-master and the smith. A curious hint of the Oriental origin of the Order was the Karwansherr, manager of caravans, who had charge of the camels—but owing to the climate he did not occupy himself with the care of just those beasts of burden. Finally there were in time the Büchsenmeister, who cast guns and cannon, and the Glockenmeister, who cast bells. Originally the name of the Order was La Maison de l'Hospital des Teutoniques dans Jérusalem, so it is not strange that an officer called Spittler should survive ; it

was he who looked after the sick and wounded. At Marienburg there was also immediately below the Hochmeister a Burgmeister who saw to the defences and sentinels, as commandant of the fortress. Ranking with him and the Grosskomthur was the Tressler, already named, who had charge of the finances, the fruits of peace and the sinews of war.

In each castle the clerical members, distinguished by a special dress, performed mass and shrived the dying, much to the disgust of



ST. ANNE'S IN MARIENBURG.
Crypt with Tombs of High Masters.

the clergy round about, who were subjected to taxation for the benefit of the Order, just like ordinary men; therefore they complained bitterly to Rome. But an order which had so many clerical and secular enemies found it necessary to have its own paid diplomats in the Eternal City to defend its rights and usurpations. We know all these facts, because some of the books of the Order have survived, including the private book defining the duties of officers, which was handed down from one Hochmeister to the other. Two household account-books, covering the period 1410 to 1420, have also escaped destruction.

The organization at Marienburg was in fact a very elaborate man's club, in which it was difficult to gain membership and where no

woman was supposed to set her foot. Still, distinguished ladies like the Queen of Denmark and the Duchess of Lithuania, coming on solemn visits, were admitted to the castle, but lodged outside the upper castle. They were permitted to visit the church of St. Mary and the chapel of St. Anne underneath. But at times the rule for the complete exclusion of women seems to have been relaxed; how are we to account otherwise for stories of inroads of milk-maids on Easter morning into the very bedchamber of the Hochmeister, where, in



MARIENBURG.
Dining-Room in Upper Castle.

accordance with mediæval ideas of jollity, they attacked the master in bed and forced him to ransom himself with gifts of money?

Such things happened under the peace and commerce-loving Master Ulrich von Jüngingen, whose jester did not scruple to act as the spokesman for the young knights, impatient to win glory and booty in war, furious because the Master was for commercial treaties and the peaceful heaping up of riches. The likeness of the Order at Marienburg to a club will seem greater, if we reflect on the original meaning of club as some have defined the word, namely, as a contracted form of the German word *Gelübde*, vow. A club would, therefore, have meant, if we accept a doubtful etymology, a band of men knit together by a vow, exactly as were the members of the Order of Teutonic Knights. It is denied by others, however, that club comes from *Gelübde*; they regard it as a specialized meaning of club as a clump or crowd of people.

The coat-of-arms of the Order bore two crosses, one applied upon the other; a slender gold on a thick black cross. According to Venator, a German authority of 1670, the original was the black cross on a white or gray mantle, said to be Pope Celestine's grant. At Jerusalem King Henry granted the right to apply on this black cross the golden one. The first, second and third High Masters

quartered this double cross with their own device. But Hermann von Salza, a master who was never in Prussia, proves himself so useful an intermediary between the Emperor Frederick IV and the Pope, that the former granted him the right to place the imperial eagle on the cross, while the Pope made him an hereditary prince. He was a man from Meissen on the Elbe and became High Master in 1210. He it was who persuaded Gregory IX in 1236 to preach a Baltic crusade. Forty years later King Louis the Pious of France, in honor of the services of the Order at the siege of Damietta, gave them the right to decorate the ends of the gold cross with lillies. The arms of the Order are, therefore, a com-



MARIENBURG.

Interior of the Church of St. Mary from the Altar.

posite granted by two Popes, two Kings and an Emperor. Here again we see the international character of the Order, which was continued down to the 15th century, when Poles, Hungarians, Danes, Britons, Flemings, Scots, French and Italians fought for the spread of German culture, so-called, among the warlike peoples on the Baltic.

The other divisions of the Order made it their business to urge the adventurous to pilgrim eastward to the Vistula in order to win their spurs in battle with the heathen. Thus in the first quarter of the fourteenth so vast an army was formed that 70,000 Poles and Lithuanians were captured and set to work building towns and castles. Again in 1354 a crusade was preached and soldiers hired. An army of 60,000 men set out for Lithuania, but was stopped by a great fall of snow, followed by floods, tempests and the pest. Another crusade was preached in 1384, this time against Jagziel, a Lithuanian prince by a Polish mother, who united Poland and Lithuania under one crown. Still another call came in 1390, when Henry, duke of Lancaster, responded with 300 knights from Britain and Ireland.

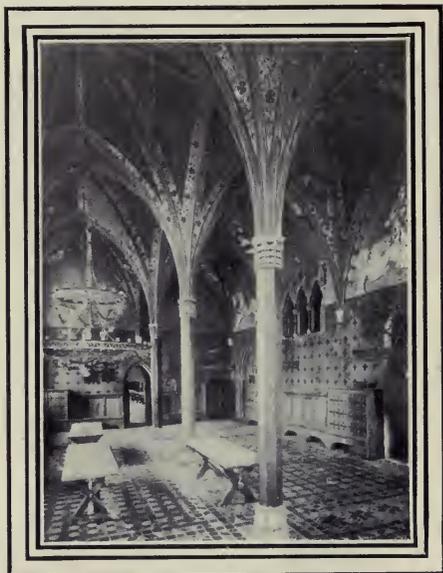
The next year a fine army of Germans, French, English and Scots plunged into the woods of Lithuania and besieged Wilna when an army of Poles and Lithuanians fell upon and destroyed the besiegers. The blow of this defeat was more than the Hochmeister, Konrad von Wallenrod, could stand. His mind gave way and he died.

Jagjiel determined to make an end of the rule of the Order, and for that object collected an army said to have numbered 163,000 men, among whom were 21,000 hirelings from Bohemia and Hungary and 40,000 Tartar horse. On the 15th of July 1410 the army of the Teutonic Order, 83,000 strong, drew up in three lines of battle at the village of Tannenburg. There they waited through the long hours of a broiling day, cased in iron and weighed down by their armor; but the shrewd king never budged till he knew they were hungry, thirsty and worn out with the heat. Then he attacked.

After three hours of combat the first line of his troops gave way, but when the Order moved forward they were caught between two converging masses of reserves and crushed. With his body-guard King Jagjiel fell upon the centre, while the wings that had given back returned to attack the flanks. Brothers of the Order, 5,000 in number, all the banners and guns, and countless horses and weapons were captured; 600 knights and 40,000 soldiers lay dead on the field.

Jagjiel moved on to the siege of Marienburg, where a brave Saxon Komthur, Heinrich von Plauen, had hastily collected 5,000 men and provisions. The pest broke out in the camp of the besiegers; after eight weeks of attacks and repelling sorties, Jagjiel had to retire. He was not provided with a siege train and his troops were undisciplined.

But the days of the Order were numbered, nevertheless. Its downfall occurred as much from internal decay as from the envy and hatred of its rivals. According to the rules of the Order the nobles of the country were not allowed to become members. They formed themselves into a secret league called the League of the Lizard, choosing a reptile as their fetish as other leagues of nobles chose



"ERHOLUNGS REMTER" IN MARIENBURG.
Upper Castle.

the falcon or the swallow. These symbols were echoes of heathendom, I believe, coming down from the practices of the old pagans, who worshipped bird and beast and dragon gods or human figures bearing a bird or beast in their hands or on their heads. The League of the Lizard was aided by the citizens of towns, who formed guilds; and the farming class and country clergy were also enraged at the exaction of taxes and tithes. In 1440 a new League was formed at Elbing, not far from Marienburg, the Prussian League, which was prohibited by the Emperor at the complaint of the Teutonic Order. But in 1454 the Prussian League defied the Order, and, with the aid of the towns,



MARIENBURG.

Market Street, Townhall, and Old Towngate in Distance.

took all the castles, until Marienburg and Stuhm alone remained faithful. Then they called for help from the Poles and Kasimir IV was able in 1457 to enter Marienburg without opposition, the Hochmeister having been plundered, beaten and driven out of the place by his own hired soldiers. Six years later the citizens of Danzig fell upon the Baltic fleet of the Order and destroyed it. It was not till the iniquitous division of Poland between Russia, Austria and Prussia that Marienburg fell to the share of Frederick the Great.

The story of the Teutonic Knights in Prussia is that of many other organizations which were so rigidly safeguarded from possible changes for the worse that they became fixed in certain ruts and incapable of adapting themselves to new conditions. In 1369 when

they retook a castle from the Lithuanians they burned all the captives alive. A century later a satirical verse sung to their discredit accuses them of loafing and luxury, not fiendish cruelty:

Kleider aus, Kleider an,
Essen, trinken, schlafen gahn—
Ist die Arbeit so die Deutschen Herren ha'n.

Clothes off, clothes on,
Eating, drinking, going to bed—
That's the work the German masters have to do.

And another, directed at the easy morals of the Teutonic knights, runs: "Where the German masters are, a man who has a pretty wife, a bushel of corn and a back door—will have plenty to eat for a year."

The Order was impossible after it had fulfilled its purpose; it could never have maintained itself; but what hastened its downfall was not the jealousy of the Polish king, nor even the undying rancor of the clerical party, but the vices of its own members. It was useless for Kniprode to send presents of wine to Edward III of England, or start a Latin school in Königsberg as well as Marienburg, or send for grammarians and jurists to lecture to the knights. It was he who introduced the sport of shooting at a jointed wooden bird on a pole with the crossbow, still a popular game in country parts. The virtues of individual Hochmeisters could not stem the torrent setting against the Order, and when the reformation began, the last clutch of the Order on northern Germany was loosened. But it still exists as a grand survival with chapter houses and occasional festivals. After the Hohenzollerns had used it as a political tool it retired definitively into Austria, where it still exists, exhaling not so much breath as an odor of parchment. It is a fossil club for royalties and hereditary princes.

Marienburg was neglected but not actively ruined under the Poles; the kings of Prussia turned it into a granary and were about to improve it off the face of the earth when a poet's protest, followed by the efforts of an amateur antiquarian, put a stop to vandalism and turned the tide. The early years of the century saw such a change in favor of restoration that the architects held high carnival over the ancient burg. Now the restorations are nearly complete. The original or Hoch burg stands solid and rejuvenated. The master's house and the refectory are in order; work is still going on in the later portions of the castle the extension which has suffered most by being torn to pieces inside for the storage of grain and hay. The present emperor has given special signs of favor to Marienburg, even to the point of promising to make it one of the stopping places on his constant flittings to and fro. The state as well as private individuals

have endowed it with mediæval collections which will soon render it yet more attractive to pilgrims.

The castle belongs to the transition between Romanesque and Gothic. Its foundations are built of the rocks found erratic about the country, but the absence of quarry stone



SUMMER "REMTER" IN MARIENBURG.
Middle Castle.
(Modern Glass Windows.)

caused brick to be used elsewhere. The massive wine cellars and lower stories with their vaulted ceilings and round-arch windows, the upper stories with their elegant central columns supporting vaulted roofs and their lancet-shaped windows, the various "Remters" or refectories for Knights and guests, the chapel in the crypt with the tombs of High Masters, make Marienburg a place of interest to architects. Here the antiquarians have a rich feast in criticising the restorations and telling each other how they would have done it, if the task had been entrusted to them. Halls with a single central column which is generally an eight-sided granite pillar with capital of limestone or brick are

a special feature. These are found also in the Rathaus of the town, in the Artushof of Danzig now used as the exchange and in the castle of Lochstadt. The claim that this is peculiar to Prussian architecture is of course without foundation, but it is true that there is an individual stamp to the architecture of these Baltic regions, as there is to the human beings there to be found. The gradual growth of Marienburg, its decay and restoration, with its final period of glory as a museum for the antiquarian and the people, constitute an example of the life of many other famous edifices in Europe; it is all the more notable because of the poverty of Prussia in buildings on such a scale, seized and possessed of such an historic past.

Charles de Kay.



ANCIENT GATEWAY TO THE KREMLIN.

MONASTIC ARCHITECTURE IN RUSSIA.

AN entrance into Russia must always be interesting to the stranger because of its unknown character. Stories of red tape flood the mind and one instinctively reckons how he may properly prove to the expectant guards that he is neither a nihilist, a brigand, nor a disturber of Russia's peace of mind. But anticipation is worse than reality: one expects more trouble than he finds.

It was my good fortune *last* summer to receive a commission in far away Russia, and having been interested somewhat in the curious systems of monastic life in that country, it opened before me the opportunity of seeing many of those interesting establishments, and more particularly to study the curious architecture whose history is shrouded in the mists of the Eastern Church systems, whose architects were generally *not* Russians, and whose worth depends more on picturesqueness than any intrinsic artistic value.

As I have said, the introduction to Russia is interesting. While yet a great way from the border a Cossack enters the train. He wears the conventional high black boots with trousers tucked into the tops. His cap is a huge bell-crown, and below it are huge black whiskers of the ferocious type calculated to bring the chills to any evil doer. His coat also is a huge affair drawn in at the waist, so that he has really the appearance of an animated Russian bell. He seizes the precious passport, gives a sharp look and is gone. We see no more of him until hours have elapsed, and hope about the passport has grown dim. Meanwhile, we have crossed the border, have imbibed many glasses of the ever-present hot clear tea, and become

quite Russianized. Then another official appears, quietly looks over the compartment, speaks a name, looks for "brown eyes, oval face, straight nose, curly hair," and after a sharp, piercing look soberly hands back the document.

During this time, as I afterwards found out, it was known in Moscow that an American, five feet, eight inches tall, with brown eyes, straight nose and curly hair, had entered the Royal domain and come under the official eye of great Russia. It was rather mysterious, and I suppose intentionally so, for nothing is truer than the Russian idea of scaring one into the belief that he is watched at every step. It is only carrying out the proverb of the country: "The



SCENE IN RUSSIAN LIFE.

gates of Russia are wide to those who enter, but narrow to those who would go out."

The country traversed is terribly depressing; long distances, huge marshy prairies, log cabins or turfed-up houses and muddy roads, which lead apparently to nothing but a wilderness of desolation. To intensify this, the mind receives a cold chill as we pass a grave-yard where not a house is visible and only the few bare black poles stand, with cross awry, desolate and decaying, around whose tops fly great droves of crows, black and gruesome. Poverty, ignorance and hopelessness seem to be an everlasting impression after the brightness of Italian life.

Only the little railway station seems like an oasis in the midst of this drear waste, for it is bright with flowers and fresh paint; the

starlings make their homes in baskets hung from totem-like poles around the house, and the clear hot tea always simmers in the huge samovar. But the groups around the station seem to belie any happiness in life, for they are a sad apathetic crowd, who look as if no joke could ever move their epidermis. Their very costume is funereal, lifeless and unchanging, and you hardly know a man from a woman since both are covered much alike. I speak, of course, of peasant folk, who seem the only inhabitant for miles around, and I



SPASKI GATEWAY, MOSCOW.

think it is this *general view* that gives that hopeless sort of a feeling, as if there never could be any possibility of rising out of their hard lot. It is depressing to say the least.

And so at last we arrive at Moscow—"brown eyes, oval face, straight nose and curly hair," and we are allowed by the grace of God and his Majesty to enter, but if we change from room 16 to room 25 of our hotel, we do so through the kind permission of the Chief of Police, and our poor passport is again reddened, or blackened, or blued, by mysterious markings.

When one reads of Athens it is a line to Athens, and a page to the Acropolis; and much the same might be said architecturally of Moscow, for the Kremlin is the veritable Acropolis of the city, and looms up with the high walls of the palace and the shining pinnacles of many churches. In the centre is the high bell tower, and around the walls are picturesque towers of different forms and sizes.

As we approach the great square which flanks the Spaski Gate, one of the most curious pictures of Russian architecture attracts the eye. It is the Church of the Protection of the Virgin, or St. Basil the Beatified. As an architectural creation it baffles descrip-



THE KREMLIN, MOSCOW.

tion, and must have been the outcome of a bad dinner and a disordered digestion. It is a total refutation of the general idea that the exterior form should be an index of the interior arrangement, and no architectural nomenclature springs to the pen in description. Basil was an idiot—a holy idiot—one who in stark nakedness was free to roam at his own sweet will, and given a liberty to speak as he listed. But do not for a moment lay up this church to his charge, for while he was buried there, the church itself was built by Ivan the Terrible, in 1555, who sent for German architects, placed in their hands Tartar designs and demanded of them that they be carried

out. It demands no description, but a view of it is sufficient to show its incoherences and grotesque irregularities.

We enter the Kremlin through the fine Spaski Vorota, known as the Redeemer gateway, the work of a Milanese architect, Pietro Solari in 1491. Over the archway is the famous picture of the Redeemer of Smolensk, so famous as a factor in the defence of the city and brought there by the Tsar Alexis in 1647. Against it no hand is ever raised, and under it no one passes without removing the hat,

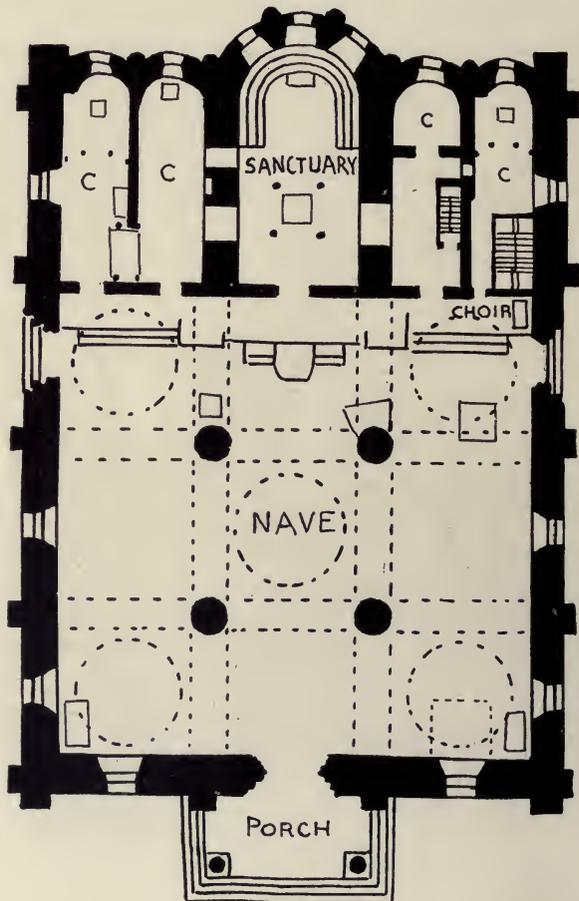


ST. BASIL.

under fear of punishment. The Russian adds to his reverence by bowing three times, and crossing himself three times, a procedure which at first moves the visitor, until he finds that the life of Russia is made up of bowing and crossing to such an extent that the action seems involuntary. A count being instituted he will probably stop after several hundred impressions per morning, and assumes that the muscles and bones have made an agreement between themselves to act upon the slightest emergency.

And so we enter the large open hilltop of the Kremlin and can understand how Mouraviett should graciously feel that Rome with its Pincian Hill reminded him of Moscow, but as he sagely adds: "Moscow without the Kremlin."

PLAN OF
CATHEDRAL OF THE ASSUMPTION
MOSCOW.



And so it is, a fortress hill, from which is seen a vast city beneath the eye, a conglomeration of domes, spires and glistening bulbs, the campagna stretching away towards the west, and the river winding itself away in the distance, lapping the foot of the Sparrow Hills, from which Napoleon first viewed the city.

"Ah!" said my good Russian friend, "when Napoleon he see Moscow, he fall down and expire at its beauty." "Ah, no," I replied, "he could never have done that; much more like his impetuous self-

ish nature to have shouted, as history says he did shout, "Ah, and that is Moscow at last: it is high time!"

We find ourselves before a high iron gate, which upon entering is found to surround the many churches near at hand, as well as the Terem and Synod, while the general plan shows besides these the Chudof Monastery, the Convent, Palace, Treasury, Senate and the Arsenal.

I think one is rather surprised at the modest appearance of the little square white-walled church that confronts us, and which, bear-



THE CATHEDRAL OF THE ASSUMPTION.
(Where the Czar is Crowned.)

ing the name of the Cathedral of the Assumption, is the Coronation Church of all Russia. An uncompromising, square white-walled structure, with copper gabled top, it is surely lacking in any architectural beauty. The most interesting feature is the east side wall with buttresses on the ends, and the side wall filled by five apsidal chapels, the centre one being the Bema, or Sanctuary. The bays only run up one-half of the height, and then receding are hooded over with three circular copper pediments, and the wall enriched with decorations. Above are the four corner cupolas with a

central one higher than the rest, and all with bulging tops shining in gilded metal and surmounted by the ball and cross, across the lower part of which is a second crooked cross-bar, the latter peculiarity arising from the Russian belief that our Saviour was deformed, with one leg shorter than the other—"He hath no form or comeliness, etc."



INTERIOR, CATHEDRAL OF THE ASSUMPTION.
(Coronation Church.)

I entered the small, insignificant entrance one Sunday morning when the church was full of people—so full, indeed, that not a foot of space was left, and one was obliged to push and crowd his way along. The whole interior was a blaze of gold and color, and the mass of worshippers, all standing, bowed and crossed continually with a restless, feverish enthusiasm. The Church is small, and the four huge circular columns, covered with frescoes on a gold ground, rise to a low-toned ceiling which divides into five domes. The church has no other architectural feature, save the many tombs which line the walls, and thus depends on the absolute simplicity of

form and richness of wall color effect. But the *ikonostas* adds the crowning glory, for like a huge rood screen it reaches across the church and runs nearly to the ceiling, a blazing mass of gold and precious stones, covering the *ikons*, which show through with a perfect wealth of richness. When one considers, however, that here have been crowned all the Tsars of Russia, from Ivan the Terrible to the present Czar the interest is increased tenfold.

Singular as it may seem this church was built by an Italian architect, Fioraventi, of Bologna, in 1473. I say "singular" because there is not the least Italian feeling in it. The same may also be said of a large proportion of the Russian churches built by Italian and German architects, which shows that the architects sunk their own training in nearly every case, and studied the Byzantine models, as illustrated in such churches as the old Cathedral at Vladimir, which had been the former cathedral of Coronation. I think it is a fair statement to say that there is little architectural beauty in any of them. Byzantine in model, they have seemed to lose nearly all the richness of detail that is found in the churches of the East and South, for the continual early warfare with the Tartars tended to introduce a stern and unyielding spirit even to the walls.

In most cases the only attraction to the eye are the curious high bulging cupolas, enriched by golden tops, and the oft-times interesting wall decorations under the cornices and pediments. Even in these architectural details there is seldom any effort at design; the mouldings, string courses and ornament being exceedingly crude and often bizarre. The size, too, of the churches in general is extremely disappointing, rarely being larger than the term "chapel" would best express.

As we enter, however, the effect is not uninteresting and a general plan of one answers for all. Totally different from any but the Eastern interior, they differ in every way from our European Church. Imagine, for a moment, a large, square hall with four huge columns, high in proportion to the church, rising to the roof and supporting a ceiling pierced with from five to nine domes of such small size as to be absolutely worthless as architectural features. A little slanting light enters and serves to lighten the effect.

The columns remind us of Egypt. There Anubis, Osiris, or Amen-Ra, in flat relief, forever march in stately array. Here Christian saints march from side to side and from floor to dome. On the south side are the Seven Councils; on the north the pictured life of the Patron Saint or the Virgin; and across the church and dividing it into two parts, is the high screen of the *ikonostas*, a mass of architectural design, filled with *ikon* upon *ikon*, from whose golden surface peer saint and sinner from their masks of gold and silver with only their faces, hands and feet exposed. Behind the *ikon-*

ostas no woman may go. It is the holy of holies, the Bema or Sanctuary from which the Metropolitan thunders the law. I say "thunders" for I have never yet heard such voices as these, which, beginning in a low and moderate tone, increase in volume till the whole church rings with their intonation.

Picture this scene to yourselves and you can see the interior of the Russian church.

A step takes us to the Archangel Church, the burial place of the



ARCHANGEL CHURCH.
(The Kremlin.)

Tsars, which is so much like the Coronation chapel. Likewise a step more brings us to the Church of the Annunciation, in which the Tsars were baptised and married. It is also of the same general description, but is honored with nine domes. All these churches are within a few feet of one another, indeed, are so close that they almost hide from view the little ancient Church of the Saviour in the Wood, which is the oldest one in the Kremlin, and was founded in the Thirteenth Century. It is a tiny edition of all the others.

In the midst of this group is the Bell Tower of Ivan the Great, built by the Architect John Villiers, in 1600, and 269 feet high. It is a sort of pulpit tower for the Sovereigns who deign to address the people, and, while not particularly architectural in itself, together with the adjacent mass of buildings makes a picturesque group. It brings into prominence, however, the bells of Moscow—those glorious bells, which have been seldom equalled in tone and never surpassed. You see in the photograph the central opening



CHURCH OF THE ANNUNCIATION AND RED STAIRCASE.

with its great bell. Imagine its sound! Think, then, of the square below on such an occasion as Easter eve; the whole city around a blaze of light; the towers hung with lanterns from the cross to the ground, row upon row, hung on the ropes seen dangling from the cross above; the square crowded with a solid mass of worshippers with tapers, and the clergy and Metropolitans in their gorgeous official robes. The church doors swing open and they enter behind the Sanctuary; the solemn chanting begins and the Metropolitan in purple robes makes a tour of the church, crawling on his knees and kissing the *ikons*, while the great bell, and every bell in Moscow, peals out the grander anthem which announces that Christ is risen!

If you look down from this tower you see the Great Palace, the Treasury, and the Arsenal, with row upon row of great brass can-

non which were left by Napoleon, and on the other side, the Convent and the Chudof Monastery. One would think as he looks down on these churches encircling the top of this hill—these churches with their golden domes and cross-topped minarets—that naught but unity and good will could be an active agent below, but probably no place has ever been more fruitful of intrigue and bloody deeds.

Directly under your eye is the beautiful staircase, so red with the



IVAN'S TOWER.
(The Kremlin.)

blood of its victims that it is called the Red Staircase. Broad and restful in its architectural surroundings, it is rightly named, for the annals of Karamsin run with intrigue and blood, and as we look down upon this old Kremlin hill, every stone is stained with its fearful color.

It almost goes without saying that the Palace is much like other palaces, interesting historically, containing some charming old rooms, and in this case, three noble halls of colossal size, making up a pile of varying architecture and containing seven hundred rooms.

The Hall of St. George, the military order, founded by Catharine, in 1769, is an enormous hall, 200 feet by 70 feet, and 60 feet high. It is a vast barrel-vaulted room with penetrations dividing the sides into alcoves, flanked by columns of the Corinthian order, and supporting Victories above. But around the wall surfaces are panels of white marble, with the names of the illustrious order in gold. The effect is grand indeed—pure white and gold in ceiling and wall, and



THE LITTLE CHAPEL, CHADUF MONASTERY.

all the furniture in the colors of the order, black and orange. I confess to a feeling of disgust, however, in finding out that the beautiful carving and capitals are of zinc. Thus are one's idols of fitness thrown to the ground.

Alexander Hall, and also that of St. Andrew, are no less grand in proportions and decorations—the former being in pink and gold, and the latter in blue, the color of the order.

And after all this grandure, upon which the peasant looks with awe as he scuffles along the polished floors, one is carried to the home quarters of the Tsar and Tsaritsa, which show that these monarchs did have a bit of home-like notwithstanding the terribly honourous duty of bearing a crown and guiding the destinies of their nation.

The Terem was the nursery of the Palace. Here the rooms are small and charming in their curious decorations. Odd tiled stoves gave heat, and the rooms starting with a large one gradually grow smaller as we ascend, till at last we are in a sort of a tower room ; in



ST. GEORGE'S HALL, MOSCOW PALACE.

these rooms it may be supposed the little Tsars could kick around, play with their silver and golden toys, and possibly—possibly howl and kick and scratch their patient nurses just like any other bit of humanity. I confess that these quarters appealed strongly to me. The crushing weight of the crown was absent ; the black whiskered sentinel was unseen ; the toys of childhood and innocence filled the walls and cases, and the shadow of distrust and danger had not seemed to reach this abode. I thought of the Coronation of the last Czar, and his beautiful companion, as he solemnly fitted the crown to her shapely head, and wondered how there could exist in the whole of Russia a soul so black who could wish them ill.

I was strongly moved also by another point in the grounds of the Kremlin.

As one turns around to go out by the Spaski Gate he passes the Convent and Chudof Monastery. I stepped into its garden, which faces the brow of the hill and came to the little square church which is a good example of the simplest architectural form of the Russian Greek Church. A high, square box of red brick; its walls divided by heavy white architraves forming three arches, and sub-divided into smaller arches in the middle section with circular arches above, filled with rich decoration on a gold ground. The roof itself is



THE DINING-ROOM IN THE PALACE, MOSCOW.

perfectly simple and from the centre springs a single high turret, with glistening bulging top and heavy cross above.

It was evident that some ceremony was being performed, for the grounds of the little garden were filled with children and a hum of expectancy seemed to pervade the groups. This was shortly explained by the procession of priests who entered bearing with them sacred dishes which held the *chrism* of a baptism to be performed. The *chrism* is the sacred ointment or oil made but once in two or three years. An interesting legend is connected with this sacred oil, a few drops only being taken from the great copper vase called the Alabastron, in which was the *chrism* sent to Russia from Con-

stantinople when Christianity was first introduced. Thus is represented the perpetuation of the ointment made sacred by the love of Mary Magdalene, for while a few drops have been taken every few years, they have been replaced by an equal amount of the new oil, prepared in great solemnity by the Metropolitan of Moscow, and after preparation sent to the several bishops of the Church.

Stepping into the church a most beautiful spectacle presented itself. Scores of little ones were being presented; the priest dipped a little brush into the *chrism*, and with great solemnity crossed the hands and feet, then the eyes, ears and mouth—"the eyes in order that the child may see only the good; the ears that they may admit only what is pure; the mouth that he may speak as becomes a Christian; the hands that they may do no wrong, and the feet that they may tread in the path of virtue." And then was each little one taken, and the whole tour of the Church made, while the little one kissed the sacred *ikons* within reach, bowing its little head and crossing its little body three times.

The night before leaving Moscow I again went up through the Kitai Gorod and passed through the Resurrection Gate with its charming little Iberian Chapel, dear to every Russian. Here again one is moved by their veneration. The little chapel is only a few feet square, yet containing as it does an *ikon* of the little Iberian Mother of God brought from Mount Athos in 1648, the platform outside is constantly crowded and every Russian speaks lovingly of "the little mother."

The virgin wears a brilliant crown and a string of pearls, but the right cheek is noticed to be scratched; scratched at one time by an infidel, and from the wound of which exuded blood. Note the love which springs into the face of every Russian peasant as they kiss the *ikon* and bow and cross themselves. No dearer drop of blood was ever shed by the infidel hoards, for the sight of this *ikon* has caused the sword to spring from thousands of scabbards, as well as shed blessings on thousands of sick to whom in their distress it was carried. Thus has superstition, love, and devotion, ever joined in moving mankind to action, whether in war or peace. One can hardly but feel its influence and be strongly moved as he sees the love of the Russian for the little Iberian Mother.

As I remarked at the commencement of this article, the monastic institutions of Russia have always interested me, and I determined to see something of them. The very reason of their existence was in different forms of superstition, of course, but the root idea of all was in retirement from society in search of some ideal of life which society could not furnish, and which they believed could be attained by different forms of self-abnegation. Poverty, chastity, obedience, seclusion, perpetual adoration, study and prayer—these were the

ideals, but the results of centuries showed the frailty of human nature. Poverty gave way to an itching palm and a disregard to the rights of others, as exemplified by the idea that the world owed them a living. Such severe asceticism also led to all kinds of abuses which ran from the ravings of a naked monk, forever bearing a heavy chain (as in the case of Basil of Russia), to the austerity of such idiots as Simeon, a Syrian monk, who spent years on the summit of a column sixty feet high. Comments to be sure record the fact that these actions gave rise to strong objections from the brother hermits themselves, one of the writers remarking in regard to the former—

“Of this kind there are not many, because it is a very hard and cold profession to go naked in Russia, especially in winter.”

Verily so!

The very extent of such life, however, led to lavish expenditure, and often to interesting architectural examples. But it must be admitted that no architecture in Russia has ever held a high place, as it consists of the most extravagant forms of all the Eastern countries, subservient to no well-understood laws, classed, of course, among the Byzantine orders, but even then perfectly lawless in its expression of forms and details, and enriched with barbaric colorings. Thus it is interesting, but never very instructive.

We started out from Moscow one bright morning to spend a couple of days at Troitsa Monastery, a few hours from the city. It was six o'clock in the morning, and the drosky rattled along at a terrific pace through the long uninteresting streets, lined by low structures, dull, dirty, and unkempt, where little patches of green and blue paint were the only enlivening influences.

Arriving after a couple of hours at a little country station we found a dozen dilapidated affairs, known as tarantas, hitched to horses by ropes. We chose one which carried with it a diminutive specimen of driver with a long cast-off Russian coat and boots and cap that made him all top and bottom. The boy was connected to his rig by strings, and the rig in turn was connected to the vehicle by other strings, and nothing but Providence seemed to stand between us and the total destruction of the whole outfit.

If the boy and his rig were picturesque, the sight that greeted the eye after a few moments ride rivals even that of the far East. I do not remember to have seen anywhere a more beautiful picture than this old monastery, with its white walls, studded with peaked red brick towers of different styles, and surrounding the little fortress made up of checkerboard refectory, glorious old bell towers, and the domes and cupolas of its twelve churches and chapels covered with bright metal and glistening in the sun-light.

Troitsa dates from 1342, and was started by Sergius of Radoneg who was a hermit and first built a small church, which, added to



TROITSA MONASTERY.

year by year at last became inseparably connected with the destinies of Russia. Legends of Sergius are endless, but possibly one having more truth than fiction is that which relates how when the Tartars advanced to annihilate the Russian forces, Dmitri of the Don was strengthened by the war-like strength of Sergius and his monks, who urged him forward to victory, and themselves led the way, dressed in coats of mail, upheld by the mysterious power of their huge *ikons* to which ceaseless prayers were offered. At any rate they conquered the invaders and drove them out. From that time the Troitsa Monastery rose in power, added to its buildings, and surrounding itself by huge walls became a fortress of defence. Its last defence was in 1615, against the Polish prince Vladislaf, who sought to usurp the power of the Romanoffs, but was unsuccessful. From this time the monastery has been often a place of refuge, and became in some way connected with almost every important event of Russia.

Ivan and Peter, best known characters of Russian history, spent most of their time here, and Napoleon knowing its power intended to destroy it, but was captured, it was said, by the charm of the Virgin of Troitsa and the spirit of St. Sergius. Which of the two had the most influence is not stated, but Napoleon seems always to have had a most susceptible heart both in reality and fiction. To Peter the place was much beloved, for it had sheltered him several

times against political influencè, and as a boy his life was preserved in one of its churches during a terrible strife, when he was crouched behind the sacred screen with Natilia. On the outside were the fierce soldiers who sought his life. "Drive him out," they cried. "No, Comrade," replied another, "not before the alter." But hardly would this appeal have sufficed had it not been for faithful cavalry who rushed in at the moment and drove out the invaders. Thus the place has been so full of thrilling scenes as to make a history in itself; strangely enough, however, its pages would be full of blood and intrigue, but very little love.

From my observation of Russian monasteries they are nearly all on the same general plan; the fortress walls, the outlook bell tower, the monk cells, the school, the generous refectory, and the many churches.

We approach through an open square filled with peasants and visiting pilgrims, all clad in a seeming superfluity of garments, huddled into all shapes, the limbs simply bound with rags, and the long, unkempt hair and whiskers surmounted by the big visered Russian cap. Here were a hundred men and women, pilgrims from the north, who had tramped hundreds of miles, grim and dirty, hungry and thirsty—all lovingly looking towards the Mecca of their religion, all anxious to kneel and vow their allegiance to the *ikons* of this curious shrine.

Entering the huge gateway we look up and observe that the walls are double in thickness, and contain a covered walk all around. Thus was the place a castle as well as a monastery.

The interior view is full as entrancing as the exterior, for one no sooner emerges from the entrance tower than he sees a vista of shady paths through avenues of lime trees, paved pathways leading to palace and dwelling, and all around great groups of ravens that find repose in the picturesque wall-nooks and greet you with welcoming croakings.

You proceed and ere long come to the picturesque porch of the Church of the Assumption, built in 1583, over which hangs a great tree with sheltering care. Architecturally it is a good example of Russian Byzantine. The very porch has the hanging pendants between the columnated arches, and the entrance is enriched (or shall I say rather defaced) by a heavy, ugly, ornamented roll moulding. The church itself is square in form, and surmounted by five cupolas, high and picturesque, but of no earthly good as far as interior effect is concerned, as the churches themselves being small, the domes have to be supported by the four columns which still decrease the apparent size of the interior. All the surfaces are ornamented by pictorial decoration, rich and effective. If you observe also the exterior walls you will find them also decorated with designs of much

value. But the important feature, as in every Russian Church, is its *ikonostas*, which, in this church, is extremely impressive. Built up with columns, frieze, pediment and panel, filled with paintings of the saints of the church, the life of Christ and incidents of their faith, surrounded by ever-glistening light, it stands out resplendent, a mass of gold, silver and precious stones. It is thus the important architectural feature of the interior, and as in all cases represents the most important adjunct to Russian worship and adoration. Even in romance the victorious warrior enters the presence chamber, bows to the sacred *ikon* before recognizing the princes, and even the Czar himself vies with the peasant in his love for the mysterious bit of art. This feeling throughout Russia seems unchanged with time as far as my observation goes, for as far back as Ivan, George Turberville wrote—

“Their idols have their hearts, on God they never call,
Unless it be Nichola Baugh that hangs against the wa'l.
The house that hath no god, or painted saint within,
Is not to be resorted to, that roofe is full of sinne.”

To the left, standing on a slight rise of ground and approached by a wide flight of steps, is the refectory, of noble proportions. It is in reality the church of St. Sergi Radonejski, but a part of it has been given up to carnal lusts of the body, for even monks must eat. A wide exterior gallery runs all around it, and is most interesting.

We stood looking from this point of vantage when a multitude of frowzy-headed, dirty and unkempt monks shuffled across the open space and gathered for their noon meal. I confess to a strong stomach, but of all smells I ever smelt, concentrated essence of cabbage and dirty Russian may be said to hold the palm.

I would like to have examined the roof and ceiling of this building, which are interesting from their peculiar iron construction, but nature could not stand the strain and we were forced to retire.

If we cross over now to the bell tower, built by Rastrelli in 1769, and 290 feet high, we pass through the little cemetery around the church, and crossing a heavily shaded road look directly into the garden of the Ecclesiastical Academy, which was founded in 1749. It is really the most important part of this monastic system, but it is hard to see how the youth can over-look the terrible condition of superstition and the low tide of morality of the monkish clergy who surround them. The retreat, however, is beautiful—the building itself of good proportions, and a sense of quiet and repose fills the place as we walk through the little gardens over whose walks the sun casts ever-flickering shadows. And as we leave it we pass out by the walls, masses of shady balconies, old staircases, broken by brick towers, some with steep roofs, others with bell tops, and the whole a very cobweb of picturesque beauty.

Everywhere are the pigeons flitting about with perfect freedom. They are sacred in Russia and may not be molested, for are they not the representation of the Holy Spirit?

We pass the palace entrance, of no particular interest, and reach the Cathedral of the Trinity. It shows possibly better than any of the others the favorite method of general construction. The form square, with numerous circular apsidal bays and the side walls divided into arched sections, the spandrils of which are covered with exterior paintings. A high central dome covered with gold surmounts the whole. From the main body grows an apse, square, with triple



TRINITY CHURCH—THE TROITSA MONASTERY.

divided side walls and surmounted by a smaller dome, projecting into a huge bulbous top shining in metal.

The whole is extremely characteristic of Russian architecture and as such is interesting. Within one is charmed also with the *ikonostas* formed of ancient *ikons* of marvelous beauty, many of them in old silver facing, whose colors have softened with age, and from whose richness glistens gems of all kinds. Here, too, are *ikons* hanging from the walls, which in time of battle were carried to victory by Peter the Great and later in the Crimean war.

Retracing our steps we go through one of the tower arches and

sitting down start to make sketches of the beautiful bits everywhere visible. To the lover of the picturesque it is a most beautiful sight to sit beneath the lime trees and among the brilliant gardens rich with flowers.

It is June, the white clouds chase one another through the skies and the sun shines brightly on the red brick walls, with their cool recessed balconies. Gardens surround you on every hand; flocks of pigeons fly hither and thither; they alight on the rustic seat and bill and coo at you as if perfectly aware that since they represent the quieting influence of the Holy Spirit you will not harm them. And, indeed, who could molest these lovely creatures? Great hives of bees also stand under the walls which are covered with sweet smelling flowers, from which the little insects sip the honey and never once threaten you with danger. The box hedges lead hither and thither, and priests slowly pass in their long robes and high caps, looking terribly religious, but if stories are true, are far from it. One is obliged to admit the truth of the old line which assures you "that only man is vile." Here you are, bound in by huge sheltering walls, picturesque towers, a veritable haphazard plan of church and tower, from whose recesses may be heard the drone of the priests, the soft tinkle of a bell or the big, rich and melodious stroke from some tower around you.

One can get into a reverie of the past of this old fortress monastery very easily, and if you would add to this the presence of the rightful owners, those whose lives have been associated with its life, you could conjure up before your eyes the visit of Alexis and his Court in 1675, as given by its own Secretary, Adolph Lyseck:

"Immediately after the carriage of the Tsar there appeared from another gate of the palace the carriage of the Tsaritsa. In front went the chamberlains with two hundred runners, after which twelve snow-white horses, covered with silk housings, drew the carriage of the Tsaritsa. Then followed the small carriage of the youngest prince—Peter the Great—all glittering with gold, drawn by four dwarf ponies. At the side of it rode four dwarfs on ponies, and another behind, etc., etc."

Verily a bit of a charm of the coronation just ended.

You awake from this reverie and the scene is exactly the same with the exception of the Tsar and his Tsaritsa. Your mind, which has been led into a semi-religious turn, is startled as you behold the same old monks, blear-eyed and sensual of face, and see the slight stagger of old vodka apparent. 'Tis wise not to investigate the present day life of idleness and superstitious uselessness, for the presence of the grand old Metropolitan Plato is no more.

But bless my heart, the churches, the tower, the doves, the bees, the flowers are there, and the beautiful sun shines on the just and



NOVO DEVICHI MONASTERY.

the unjust, all of which cannot blot out from our minds the beautiful picturesqueness of the whole scene.

It was not only the monks who sought seclusion from the world, looking for an ideal that ended in the general desire to avoid work. The Russian sisters also took upon themselves religious vows and founded convents which have become famous. Away upon the outskirts of Moscow lie the white walls of Novo Devichi Convent, at which I spent a day. We approached it by way of Sparrow Hill, made famous by Napoleon. The walls are well preserved, lined with machicolations curiously wrought, and enriched by red brick-topped towers, circular and square, and the whole mass of churches, bell towers, and other buildings springing from the architectural mass. A lofty, square bell tower with three arches and picturesque wings gives entrance, and a most beautiful view greets one. Directly in the centre of the convent space is the large cathedral church, with circular gabled roof line and surmounted by the usual central dome, covered with gold, with four corner cupolas on the angles, painted in blue. The entrance is very picturesque, surrounded by the graves of the sisters and is approached under a heavy columnated arcade and staircase. Over the entrance in a circular pediment is a beautiful *ikon* in rich colors and gold, and representing one of the most

charming wall decorations I remember seeing. Here were gathered the sisters for service. Shall I say sweet-faced sisters? They certainly were so.

Richly endowed, the convent was originally opened in 1524 in commemoration of the capture of Smolensk, and was a refuge for Tsarinas, who renounced the world. It is still a retreat for those who finding no chance for happiness in married life, give up their life to the education of noble girls. And this leads me to digress sufficiently to say that it was easy indeed to see how Russian ladies of good birth and education should choose to spend their lives here rather than in the pitifully desperate plight of waiting the appearance of the decent, educated, and refined lover to woo them into the sea of matrimony. To the traveller such chances seemed few and far between in the thousands of miles of desolation that seemingly made up the country known as Russia. And so, I say, it was with feelings of sympathetic interest that we watched these sisters as they entered into their devotions in this little cathedral. We saw a service in which only one man was admitted, and he the Metropolitan who only could approach and pass the lofty and magnificent *ikonostas* which led to the holy of holies; a service where all chanting and all the curious offices were performed by nuns, in long black robes and high-peaked hoods, with only their faces visible. And as one after another came forward, and on her knees chanted the litanies and responses, the remainder incessantly bowed and crossed themselves, the two first fingers only and thumb being used as the mystic symbol of the Trinity.

Beginning in a low, sweet response the voice grew stronger and stronger, till after some mystic sign from the Metropolitan, the last response increased in a long drawn out sound which died away in a wail of penitent anguish. And then from some part of the Church which we could not see came the sweet, soft music of a women's choir, weird but ineffably sweet chords, which brought to mind a long drawn out Sheherazade of old. And so the service ended and the nuns returned to their little one-storied cells, before each one of which was a garden patch full of sweet peas and zinnias, from which they gathered nosegays and possibly lamented that in all Russia there did not appear a knight for whose love they might throw off the black and assume the white and orange blossoms.

A thrilling story is told of these sisters at the time of the French invasion.

Napoleon to emphasize his retreat went directly past this convent, and not content with the havoc which his miserable ambition had caused his sister nation, he sought to blow up the convent which had given him shelter. But he counted out the heroic sisters, who not only repulsed his attempts at entrance, but fought royally and

put out the flames which Napoleon caused to be ignited so as to reach the powder concealed in the church. Such conduct was worthy the wretch to whom nothing was sacred!

The bell tower is interesting, and one of the sisters gave us the key, so that we might ascend the five stories, from which height a magnificent view is obtained of the old city of Moscow with its winding river and the Sparrow Hills covered with little pleasure booths. It was the first point from which Napoleon saw Moscow, and also from which he started his welcome retreat.

Historically, this convent, founded by Varili III., in 1524, is interesting as being the home of Irene, widow of Theodore I and



DONSKOI MONASTERY.

daughter-in-law of Peter the Terrible, and also Sophia, the sister of Peter the Great, who governed Russia from this retreat during the minority of Peter. For, although Irene and Peter were declared joint sovereigns, he was incapable of rulership, and the power was vested in Sophia.

Other monasteries in and around Moscow are also very interesting. Donskoi, founded in 1591, was once of great size, endowed with seven thousand serfs. It has a most peculiar circular bell tower in five retreating stories besides five churches.

Novospaski also is still more interesting, and its enormous white-

walls, its glistening domed cathedral, its picturesque towers and magnificent bell tower 235 feet high are seen from afar. Indeed, this whole mass makes a most picturesque grouping, in which the architectural detail is remarkably fine.

Several miles from St. Petersburg is the monastery of the New Jerusalem, full of associations of the monk and afterwards the Metropolitan Nikon. A whole article might be written on this picturesque spot which "is as beautiful as Jerusalem itself."

And the same might be said of Kieff, the most important monastery in Eastern Russia. Its point of architectural interest is its



NOVO SPASKI MONASTERY.

church of St. Sophia, the prototype of its Moslem brother in Jerusalem. Memories of Yaroslav and Vladimir haunt the place, and the sight of this wonderful place, filled with a motly group of pilgrims, is like Troitsa, except that being further removed from what the traveller calls civilization, it is full as interesting and bazarre. No better description can be given than that by Hare when he looks around and sees—

"Cossack men in a single garment of sheepskin or sackcloth; women in turbans, short, brilliant colored petticoats and jack boots. Most strange at first is the bowing, curvetting and prostrating figures, never making their obeisance at the same time, but just when

the impulse of the moment prompts them; and yet no one can help being touched by the reality of their reverence which is seen here, the absorption unconscious of all surroundings; often the wrapt attention. At night, near all the churches, rows of sheepskins may be seen lying on the ground. These are men and women asleep under the stars, sheepskins being at once the dress, beds, carpets and tents of the peasants."

I will speak of but one more monastery, and that shall be Simonof. It stands like a jewel in the midst of the desolation of the outskirts of Moscow and is approached through what might once have been a charming grove of trees, but which seems now to have



SIMONOF MONASTERY.

taken on the forlorn and poverty-stricken look of the neighborhood. Why it happens that the original entrance under the bell tower has been closed and one is forced to sneak around to some other gate, I do not know, but I could not help thinking of the Biblical injunction as we went around between the cliff and the wall by a sandy path and at last entered a small archway. Then it is, however, that the dirt and squalidness of Moscow is forgotten, and a vista of enchanting beauty lies before us. There are four paths leading into charming retreats of shady walks through which the warm sunlight breaks across the path in showers of flickering light.

Directly in front but away down the avenue is the central church porch, above which you can see the white domes and golden coronets almost dying away into the azure blue of the sky. To the left is the great bell tower and the shrubbery is so full that only glimpses of its beauty are seen, and yet it is a monster, both in size and height, and is surmounted also by its golden crown. And to the left one sees the checker-board refectory church. I remember that I wondered if that form of decoration was a particularly good stimulant to the digestive apparatus, for my monks in plaster on my book case almost look down upon me rather gauntly, while those whom I see in gown and hood seem to have a preponderance of paunch. But the shrubbery hides them as they pass, and I see bit after bit of picturesque towers and walls and balconies, which leads one again to remark that all the monastic establishments of Russia seem to be laid out exactly alike in plan and feature, and only vary in detail. Scattered around also are other churches and the cells and out-buildings of the monastic life. The monastery was founded in 1370 by St. Sergius, who, it will be seen from Russian monastic history, was a most important factor.

Here we had a glimpse of the regular life of these monks, a glimpse that threatens approaching dissolution, I think, for certainly no moral or intellectual good could ever result from the daily life and devotion of such monkeries.

As we entered, the place was seemingly deserted, but upon approaching the central cathedral, men were noticed at work on the structure. The cupolas were being repaired and the interior *ikonostas* was being regilded and a new panel added.

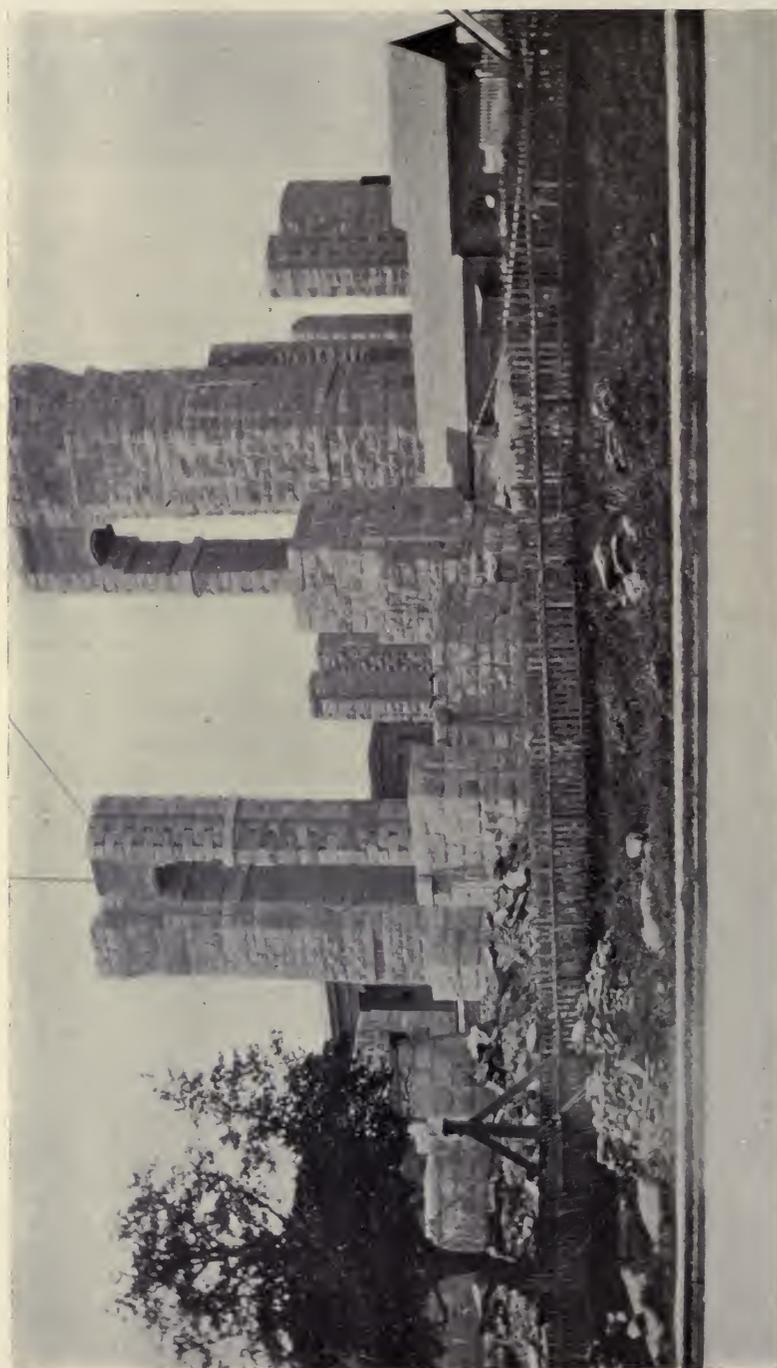
The old church is of Byzantine feeling, with five cupolas, which shine in the morning sun, and its *ikonostas* is now being restored as of old. Here is an *ikon* missing, and we are told that it is one on which St. Sergius blessed Dimitri of the Don, when he went out to conquer the Tartars. The old monk, who turned out to be the Metropolitan, leads us around with unctuous grace, evidently speculating as to the amount of his fee. Suddenly the huge bell in the tower nearby rings out and with many apologies he leaves us for some service. Following him, we entered the old church in the rear of the larger one, and here were three old women awaiting a service for which they had paid several roubles. The monk has changed his robe for a richer one, and advancing to the *ikonostas* with ill-concealed carelessness, mumbles away the forms, which answer to the litany. The old women bow and cross repeatedly. Suddenly another monk crosses the church in the distance and the older monk shouts out to him to come and continue the service. He advances, starts off at a rattling pace on the Epistles known to him as the *Minacon* and *Octocchos*. Meanwhile the older monk has broken off

with what seems very scant petic propriety, and shuffles off to us to ensure his fee. The great bells in the tower keep up their solemn tolling, which tells of a service being performed, and just as we are about to go out we hear another monk, who with changed voice and glorious intonation, rings out the service of the Trisagion, in which the word holy is thrice repeated with ever-increasing tone. The old women increase their genuflections and crossings until the last reverberations of the voice have ceased, when they arise and, making a complete tour of the church, kiss *ikon* after *ikon*, all the time bowing and crossing, till they conclude their devotions for very fatigue. I ask to whom their many roubles go, and my guide, turning with an expressive gesture, simply answers "Vodka." This rather sweeping answer seemed harsh, but I think the general impression is the same, the true monastic feeling as handed down from the saints of the church has disappeared, and the great sin of Russia is stamped even on its monastic life and those who support it—whiskey.

Around the walls we walked, sketching the curious old towers, balconies and architectural bits of picturesqueness until the setting sun warned us of approaching evening.

The quiet walks seemed deserted; the monks slept within their little cells; the bees buzzed feebly in the syringa, and as we went out under the archway the old walls became enriched by an after-glow; the shadows of the willow grove cast long shadows upon the fast-fading brilliancy of the green meadows, and the great tower frowned down darkly upon our pathway, as one of its huge bells tolled out the requiem of a departing day.

Chas. A. Rich.



PRESENT CONDITION OF THE CATHEDRAL OF ST. JOHN THE DIVINE.

New York City.

Helms & La Farge, Architects.

HISTORY FROM A GARRET.

I RENTED recently for the summer an old house long uninhabited in a certain dormant New Jersey village. Everything about this hamlet has the air of by-gone times, except, indeed, that lately macadamized main road, which nothing traverses but an occasional farm-wagon and some stray meandering bicyclist, who invariably, as I have observed, slackens his pace to discover some sign of his whereabouts or some indication of life amid the unexpected surroundings. There is little of a public nature to enlighten him. So seldom is there anyone astir that he might reasonably wonder whether the village was not a lost survival of a hundred years ago, which the affrighted inhabitants had suddenly evacuated upon his approach.

A hundred years did I say? Some few of the houses must surely antedate a century, though we dare not accept the local tradition which erects them near the year of Queen Anne's coronation. The greater number of the buildings, I judge, are of quite modest antiquity. Probably they were constructed within the twenty years whose meridian was eighteen hundred and twenty-five.

The house that I have rented is one of the earlier. There still clings to it that air of quiet gentility, that certain charm of homely urbanity which distinguishes, and is, indeed, the secret of the "Old Colonial." I wonder greatly where the Jersey country carpenter acquired the lightness of touch and the refinement of taste which removes from modern work by much more than seventy-five years that dentiled and box-columned porch in front of my door and that festooned cornice under the steep, weathered roof! I wouldn't exchange his simple doors and casements nor his even plainer stairway for any amount of "hardwood" trim. And this—the stairway—leads me to my point—the garret.

On my first tour of inspection, after our household was settled, this garret was the last spot I reached. It contains no rooms, but is open over the entire area of the house. It is roofed by heavy oaken beams and visible shingles, which slope almost to the floor. But not quite. On the floor line of the longer sides are four windows, mere semi-circular lunes, through which the evening sunlight was streaming when I entered, and the yellow radiance blending with the reflected tones of the weather-stained timber colored the atmosphere gold and brown. The dust was so thick under the feet that it was like velvet. Around the two brick chimneys which intruded from the rooms below were accumulations of finely disintegrated brick and mortar. Cobwebs, mostly untenanted save by the almost

ghostly fragment of dead insects, were everywhere. Clustered along the rafters were deserted red clay hives of colonies of hornets. The place was so still and forgotten, so apparently unattached to any memory that I felt an uncanny sense of intrusion, as though by some necromancy other than the payment of a small monthly rental, I had been permitted to really enter the past and step physically into the atmosphere of by-gone days. I would not have been surprised had shadowy forms advanced to meet me, and I can imagine how beautifully the faces of a departed generation might have grouped themselves in the sunlight and the shadow at that moment. The sentiment of the place compelled me to step lightly as I moved about.

In this cautious manner I had almost completely circumambulated the garret when I discovered in the darkness of one of the low corners an old iron stove. It was only a fragment. It was powdered thickly with rust. I might have passed it by without examination had not something in its make attracted me. Its surface was covered with elaborate arabesque ornamentation exceedingly well cast. In order to inspect it thoroughly I drew it into the light and then I noticed, hidden in what was the fire-box, a number of discarded volumes. Some of the covers were missing. The pages of all were discolored and stained as though water had leaked in upon them from the roof. Perusing them one by one I found they were fragments of the literature current when the house was still new. They were, moreover, of a dull domestic type, save three, which did, indeed, bespeak the scholar and his interests—a new testament in blinding, crabbed Greek text, entirely unsuspecting of Porson, a French version of Catullus, and a leather and linen covered volume of "The Architectural Magazine and Journal of Improvement in Architecture, Building and Furnishing and the Various Arts and Trades connected therewith," published in London in the year 1835, by Longman, Rees, Orme, Brown, Green & Longman, of Paternoster Row.

Here, then, I had alighted by chance upon the predecessor of The Architectural Record, and—another instance of there being no new thing under the sun. I ran hastily over its contents: "On the Studies and Qualifications necessary for an Architect," "Thoughts on the Origin Excellencies and Defects of the Grecian and Gothic Styles of Architecture," "A General Survey of the Present State of Domestic Architecture in the Different Countries on the Continent of Europe," "Further Remarks on Palladio," "A Waterproof Casement," "Designs and Description of a Double Door for a Room, So Contrived that one Door cannot be Opened until the other is Quite closed," "Observations on the Comparative Advantages and Disadvantages of the Various Systems of Heating by Hot Water now

in Use, and on the System in General," "Remarks on Competition Plans with another Instance of Partial Decision," "On the Discrepancy which often occurs between the Sum charged for the Erection of a House and that which the Gentleman building expected to pay for it." So slowly do we move in some matters, I thought, that even to-day, nearly three-quarters of a century later, the Architectural Record might take these very titles as texts for articles for a later generation!

But two articles especially attracted my attention because they related to New York City, and I have ventured, therefore, to present them to the readers of this magazine, believing they will be as much interested by them as I was when, after my descent from the garret, I read them carefully.

H. W. Desmond.

Art. VI. Street Houses of the City of New York.

By William Ross, Esq., Architect.

In my former communications [which, unfortunately, never reached us] I only alluded to the general principles, as it were, of the buildings of this city; in the present paper I intend to go more into the details. Of the general sameness of design (or rather want of design), in the street fronts of the houses, I have already spoken (in the lost papers); and I likewise mentioned that the new houses are built much more substantially here than they are about London; but, on further acquaintance with the subject this remark must be taken with great latitude. A much greater quantity of timber is, indeed, used in the joists and roof than in England; but the want of consideration which is shown in its application, as well as of scientific skill in its distribution, more than counterbalances this advantage. The fire law requires, for the prevention of fires, that no wall be built less than one foot thick; and the builder takes too good care of his bricks (which are here 8 ins. long, 4 ins. wide, and about 2 ins. thick) to make them any thicker (i. e. than a brick and a half). When we consider that some houses are six stories high above the street, and two below its level for cellars and basement, it is evident that the practice of loading the walls with timber does not add to their stability.

While writing this paper an alarm of fire was given in the neighborhood, in a large house of four stories above the ground. The side wall has fallen, crushing the roof and considerably injuring the adjoining house, or rather store, which was at least 12 ft. distant from the one on fire, and would otherwise have escaped damage, as the wind was in a contrary direction. By the way, fires are so frequent here that they excite no alarm (except in strangers, for the first night or so); and the rule is, if the alarm is given during the night, to put the

hand on the wall at the head of the bed, and, if it feels rather warm, to get up; but, if otherwise, to turn about and go to sleep again.

To return: many of your readers may not be aware that the streets of all the cities in the United States are laid out in parallel lines, crossing each other at right angles, or nearly so, and at nearly equal distances apart. This will, in some measure, account for the sameness and monotony which I formerly alluded to in their appearance.

"Street answers street, each alley has a brother,
And half the city just reflects the other."

Each lot or building site occupies, as near as may be, 25 ft. frontage, and 100 ft. in depth. Of this depth the house occupies from 45 ft. to 55 ft.; the remainder is used as a court, at the far end of which are two Greek temples, dedicated to Cloacina; the only access to which is through the open court, exposed to all the rain and snow, and to the view of all the back windows in the house. These temples are placed immediately over the cesspool, into which, also, all the waste water from the house is thrown, and the whole surface exposed to the air when the flaps are left open. I leave to your pen to point out the effect of this arrangement, as it is more able to do it justice than mine. Yet there are officers styled "Inspectors of privies and cesspools."

I have already said that the greatest difference of design consisted only in the number of stories in height, and in the height of the stories themselves; so that I will now say something of their arrangement in plan. The lower, or second, story down from the street is intended for cellars, and need not be particularly described; the one over this is called the basement. (Fig. 210). In this plan there are the entrance, a; passage, b, which is in length the whole depth of the house; staircase, c; kitchen, d; oven, e; and in the front is the large room, f, the windows of which look into the front area, and where the family live, except when they have company. There are four closets, g; two entering from the passage, and one from each of the two rooms.

The rooms are all divided by quarter partitions, seldom, if ever, trussed; the sides are all battened out from the walls and lathed; and to this circumstance is attributable the oversight I committed in my last, when I said that the houses here were built more substantially than in London.

On the principal floor the arrangement is much more simple than on the basement, there being only two rooms, communicating by folding or sliding doors, and the hall or passage, which likewise contains the staircase. These rooms, called the dining and drawing-rooms, are, generally speaking, only used for company; the family usually living in the basement, as before observed. On the next and all the upper floors, the arrangement is the same as on the basement;

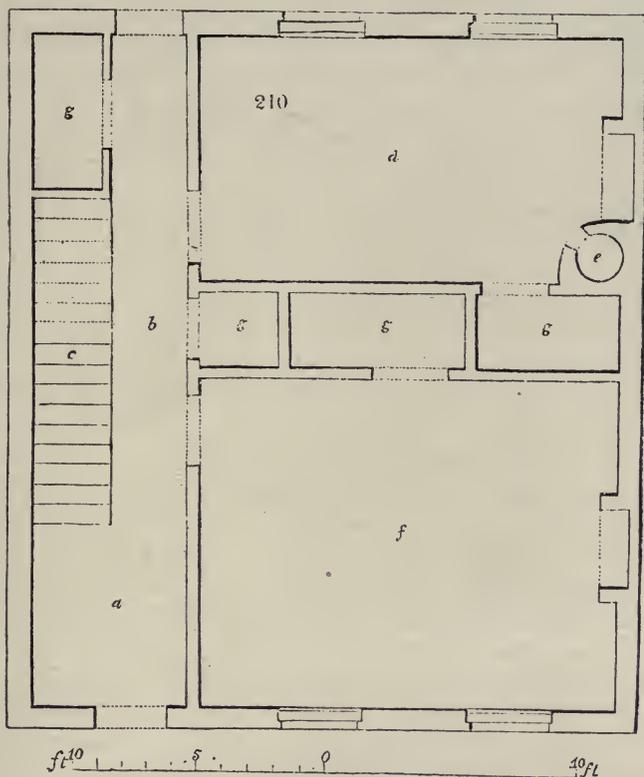


Fig. 210.

that is, there are only two rooms, a front and back bed-room with closets in each.

Such is the arrangement of one private house, and the same description will apply to five hundred of them; the same plan being almost invariably adhered to, and varying little throughout the whole city, save in the dimensions of the rooms, and perhaps a few inches in the height of the stories.

In the elevations of the houses in New York there is considerable apparent variety, but it consists solely in a little difference in height, and sometimes in the size of the windows. The doorcase to the principal floor, which is always four or five feet above the street, is in the better and middling class of houses, decorated with two columns, either triglyphed or voluted. The proportions of these columns are as various as are the builders, each having a proportion of his own; the triglyphed from seven to twelve diameters high, and the voluted from ten to eighteen; yet each are pure Greek. The Greek mania here is at its height, as you may infer from the fact that everything is a Greek temple, from the privies in the back court, through the various grades of prison, theatre, church, custom-house, and state-

house. There being no taxes here upon windows, each door has sidelights, as well as a fan-light; so that the hall is as well lighted as any room in the house. The bricks of which the front is built are painted of a glaring red; while the doorcase, window sills, and lintels, or supercilia, are of white marble: the contrast to an American is very pleasing; though doubtless, few Europeans will fully sympathize with him in this respect.

I had intended to send you an elevation to accompany the plan (Fig. 210); but I neglected to prepare it till it was too late; for which I must apologize, and promise to be less remiss in future. I will, if possible, send it with my next. The roofs are now generally covered with tin, as lead will not stand when exposed to the great difference of temperature which occurs here between the winter and summer; it is about 118°. There are few or no parapets; those that exist being only boards over the cornice, which is also of wood, and generally consists of an entire Greek Doric entablature, nailed on the front of the house; having the gutter formed in the upper surface, and the rain-water pipe, which is likewise of tin, carried down the front of the house. The entablature of each house returns on itself, so as not to overhang the adjoining property; and the decorations, including the mutuli and guttæ, are all painted white, to harmonize with the door-case, etc.

You will think I have drawn no very flattering picture of the architecture of New York; but, like London, there are a very few structures which may command considerable praise; but then, they form the exception, and not the rule.

The New York University is a mountain of white marble and brick, with Italian details, more incongruous than those of Wren's towers of Westminster Abbey; it is more indebted to the woodcutter (Mr. Mason from London) than any work I have ever seen. In London it would be termed "Carpenter's Gothic;" but even that can give you no idea of its hideous abortions and monstrous absurdities. With such a specimen as this before their eyes, no wonder that the Greek, "the classic and simple Greek," is preferred by the people, who will not be gulled into admiration of anything so outré as this university.

New York, Dec. 31, 1834 (received April 17, 1835).

Original Communications.

*Art. 1. Plan, Elevation, Section, etc., with a descriptive account of the Improvements lately made at the Custom-House, New York.**

By William Ross, Esq., Architect at New York.

The whole of this building, which is now in the course of erection in the City of New York, is to be of white marble, and your readers may, therefore, fancy that it must be splendid; but, were they to see it, they would have no hesitation in saying that Bath stone is much to be preferred, as the marble is left rough from the chisel. The value of marble here is chiefly in the fine polish of which it is susceptible; and, when it is not polished, it is no better than any other stone.

The windows in the exterior are in two tiers; they are each 10 ft. high, and 5 ft. wide, and set in a space of 7 ft. 9 ins., which is the clear of the pilasters: the latter are 4 ft. 10 ins. on the face, and project 3 ft. from the wall. The mode of forming the vaults of the apartments q q, in the section, is the same as that employed in forming the ceiling of the rooms next to Pine street. This mode I shall particularly describe at a future time, as it is peculiarly adapted for London or other shop fronts. The long flight of "shelf-like steps," to the Wall street front, I proposed to arrange in the same manner as those of the portico of the London University; but this proposition was overruled, as that manner was considered "not to possess dignity enough."

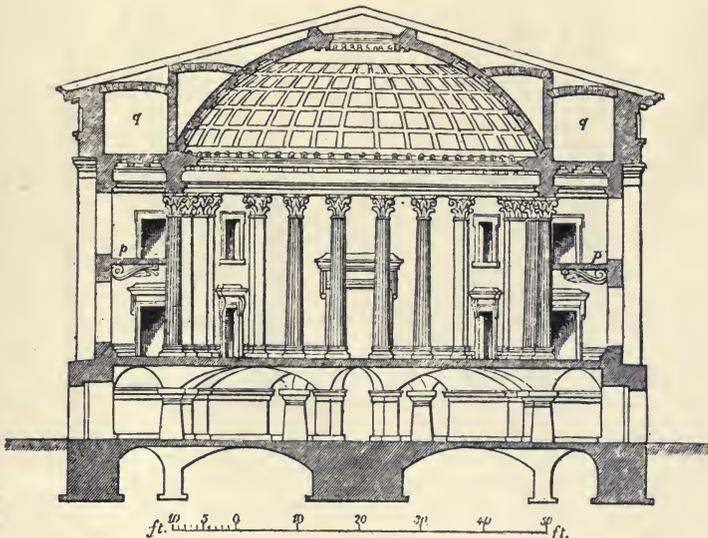


Fig. 223.

Fig. 222 is the principal plan of the building.

Fig. 223 is a transverse section through the great business-room,

*Now the Sub-Treasury, on the corner of Wall St. and Nassau St.—Ed. Architectural Record.

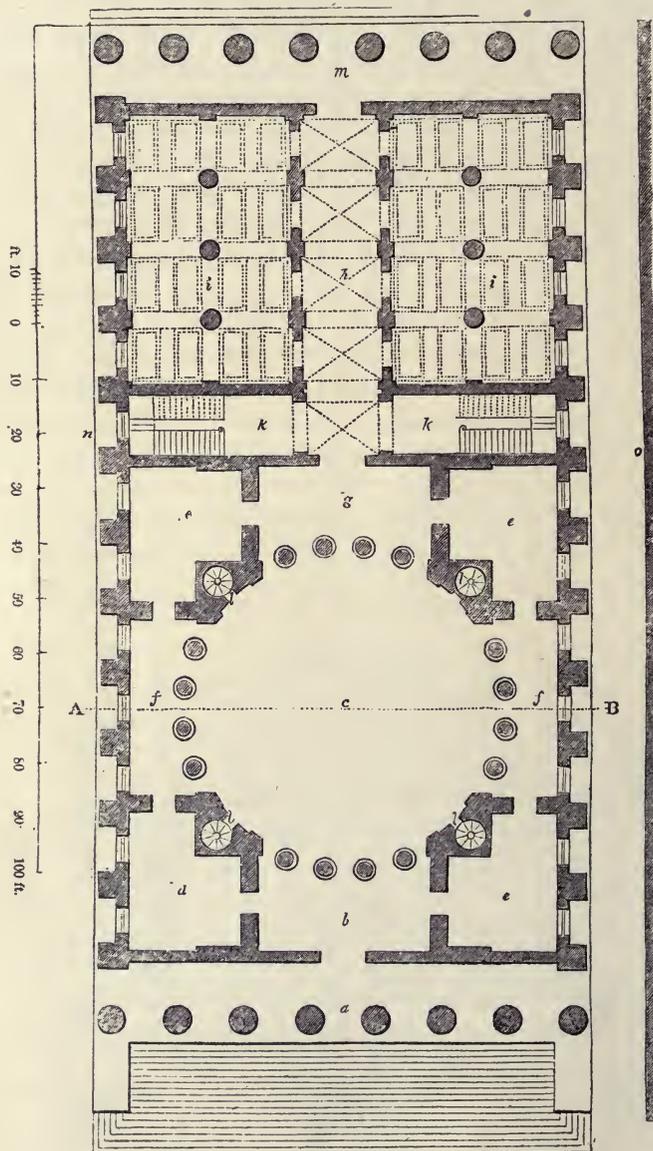


Fig. 222.

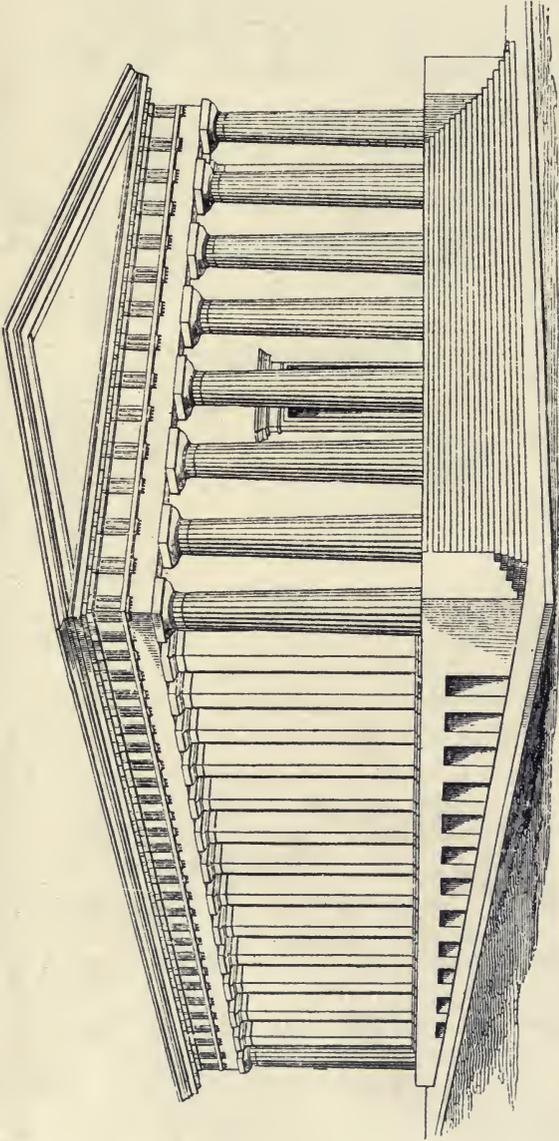


FIG. 224.

on the line a b, Fig. 222. In this section are seen the vaulted apartments under the principal floor; the galleries (p p), supported by trusses; and the apartments (q q) in which the papers are to be preserved.

Fig. 224 is a perspective view of the building.

Fig. 226 shows the interior finishing of the two large doors entering to b and g.

Fig. 225 is the profile of Fig. 226.

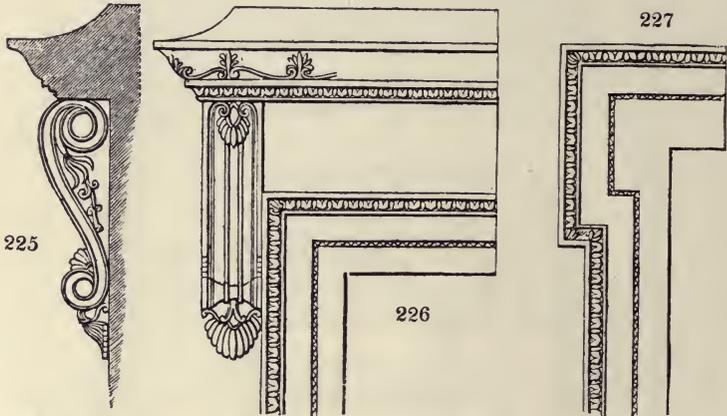


Fig. 227 shows the tracing round the windows which open into the great business-room, and light the winding staircases.

In the principal plan (Fig. 222), a is the portico and principal entrance from Wall street; b, the hall or vestibule; c, the great business-room; d, the collector's private office; e e e, three private offices; f f, recesses, over each of which there is a gallery supported by trusses, forming a communication between the rooms of the upper floor; g, a vestibule uniform with b, which leads to the arch corridor h; i i, offices; and k k, principal staircase leading to the floor over these offices. In the large piers of the cupola there are four winding staircases, l l, two of which lead to the roof, and the other two to the vaulted garrets under the roof, in which papers are intended to be preserved. The portico m forms the entrance from Pine street; n is a sunken area, and the front to Nassau street; o is the United States Bank.

The original design for the Custom-House was selected from a number of competition plans; and, in order that your readers may judge of its merits, I send you the original plan (Fig. 228), and the perspective view (Fig. 229). In the latter figure, the details, and a part of the basement, are omitted, as they are the same as those of Fig. 224, and are not necessary to be repeated. In looking over the plan (Fig. 228), your readers may, perhaps, be able to perceive what it has puzzled me to find out; namely, the supports and abutments

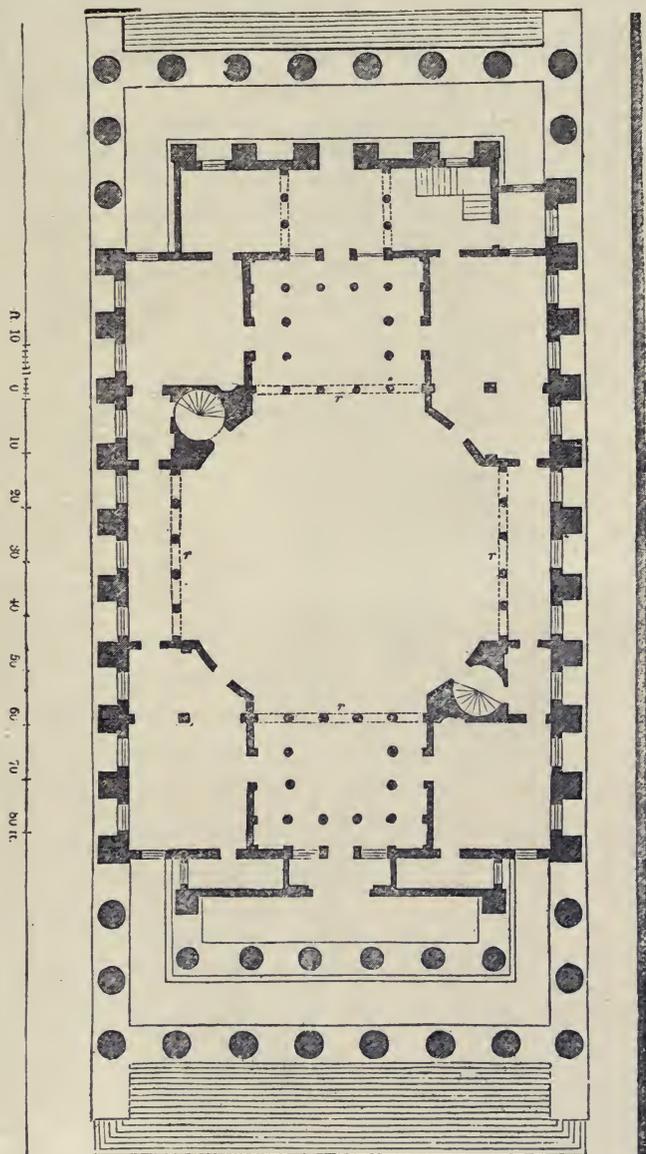


Fig. 228.

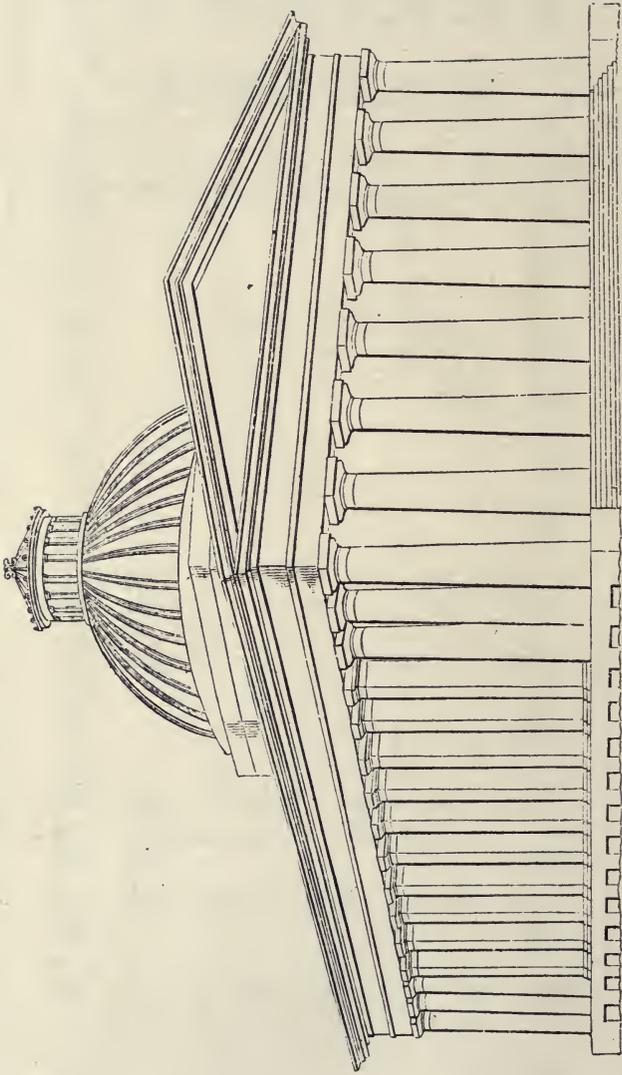


Fig. 229.

of the double-vaulted cupola, which rises so majestically on the ridge of the roof of the temple. (Fig. 229). In doing so, it will strike them that the columns, which are so profusely used, cannot, from their situation in straight lines (r r), carry any part of the pressure; and, indeed, they were not so intended; they were to carry nothing but their own entablature, the ceiling being arched like that of a church, with transepts; and the hemispherical and spheroidal vaults over the intersection, to rest on 16-inch brick walls (a brick here being 8 ins. by 4 ins., and by $2\frac{1}{2}$ ins.). Your readers will, perhaps, imagine that the designer of this cupola intended the arched ceiling to be formed of timber, and lathed; but this was not the case. There was not an inch of timber to be in the edifice, for the whole was to be of stone, iron, and bricks: even the roof was to have been of marble, and so were to have been the cupola and lantern! A description of this approved design may be seen in the "New York Mirror," to which I refer your readers.

By the arrangement of the desks on the plan (Fig. 228), the greater number of the columns are concealed to about 4 ft. from their bases; and, this being the case, one can hardly conjecture their use at all; for an arched ceiling, with a cupola on the intersection, would not be incapable of a very pleasing effect, unless, indeed, the Parthenic exterior might have spoiled it by its associations in the mind before entering. But what would be said, if double rows of columns were placed between the sides of the nave, choir, and transepts of St. Paul's, London, with their entablatures running longitudinally and transversely from each column, and forming a species of network, with the space between the top of the cornice and the apex of the arch, having the appearance of a naked floor, when looking up through it? Notwithstanding the length of the foregoing remarks, I have not pointed out one-half of the absurdities of this original design; for, like Hogarth's perspective frontispiece, new ones are discovered every time I look at it.

After the drawings had been selected from among the other competition plans, and adopted, they were sent from Washington to three gentlemen in New York, who were appointed commissioners for the erection of the building (one of whom was the collector of the Custom-House). On these gentlemen examining the drawings minutely, as to the accommodation afforded, they found that it was quite inadequate to the purpose intended; and even this was not discovered until the foundations of the external walls were laid. It therefore became necessary to have the drawings revised, and I was applied to for this purpose. What I have been able to make of the building will be seen by comparing my plan (Fig. 222) with the original plan (Fig. 228). My instructions were to preserve, as much as possible, the appearance of the original plan and elevations; to provide more ac-

accommodation, and to keep the long, or business, room of the cruciform shape, as before, with the cupola at the intersection. These instructions have been complied with, as far as practicable, as may be seen by comparing the plans, etc. No part of the building is my design; at least, no part of the exterior. To it I have done nothing, except what was necessary to increase the accommodation within, and to get rid of the Italian cupola, which I was only permitted to do after a long discussion. In the interior I have provided supports, for the hemispherical vault over the middle of the large room to rest upon, as may be seen by Fig. 223. I have arranged the columns so as to be of some use; and I have also reduced the inordinate projection of those external lateral excrescences, which, to call buttresses, would be to profane the term; and what other name to give them I know not: the section will show the form of ceiling behind the columns. Behind the columns, at the sides or transepts, are galleries, which communicate with the rooms on the upper floor that are next the portico in Wall street, as the winding stairs in the large piers are not intended for the public. These galleries are supported by iron trusses, as shown in the section. (Fig. 223). Another section, showing the mode of forming the level ceilings over the large rooms next Pine street, will be sent at some future time, and will form a communication by itself, as the method is entirely unknown here; and, if it be known in London, it is not practised; at least, so far as it has come under my observation, or else the "Bishopgate bressummer" would not have made the noise it did in the "Mechanic's Magazine," in 1830.

The mode which I proposed of warming and ventilating the building has been set aside; there is now to be a stove in the cellars for every room that is to be warmed, and ventilation is left to chance.

New York, March 14, 1835.

No. 4 Avenue d'Jena,
Paris.



M. Schoellkopf, Architect.

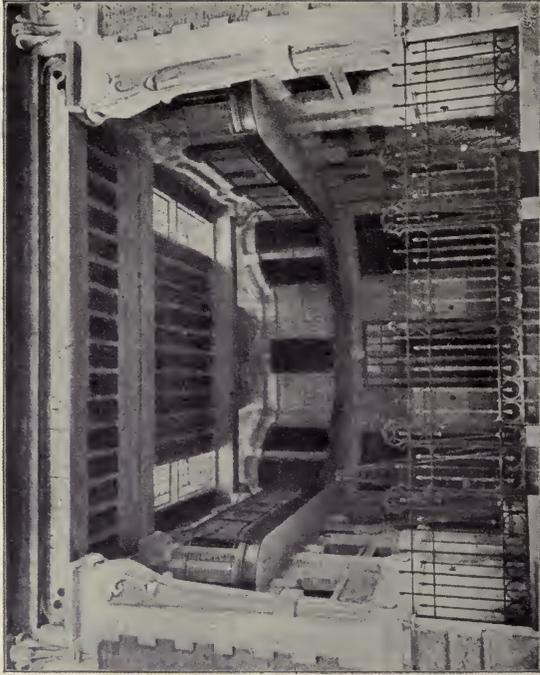
“Dekorative Kunst.”



No. 4 AVENUE D' JENA, PARIS.



No. 4 AVENUE D' JENA, PARIS.
(Rear View.)



No. 4 AVENUE D' JENA.
(Stable Entrance.)



No. 4 AVENUE D' JENA.
(Stable Entrance.)



No. 4 AVENUE D' JENA.
(Detail of Façade.)



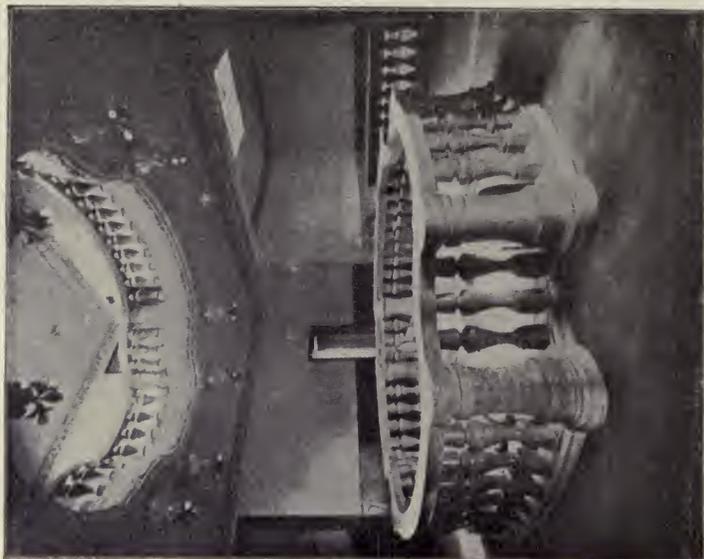
No. 4 AVENUE D' JENA, PARIS.
(Salon.)



No. 4 AVENUE D' JENA.
(Staircase.)



No. 4 AVENUE D' JENA.
(Dining Room.)



No. 4 AVENUE D' JENA, PARIS.
(Views of Staircase.)



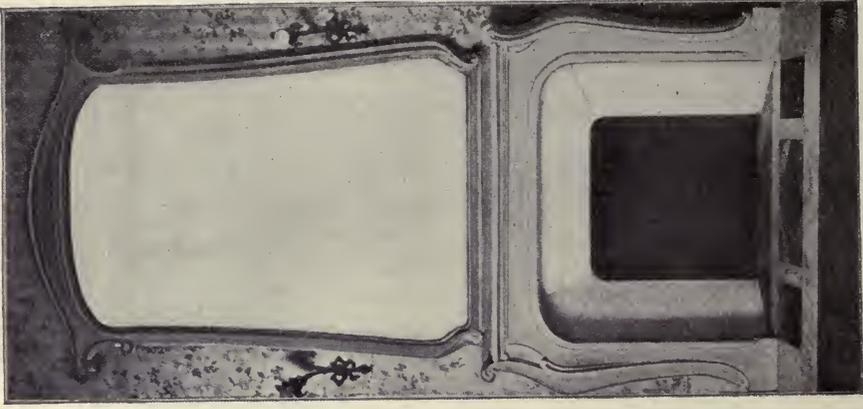
No. 4 AVENUE D' JENA.
(Dome over Staircase.)



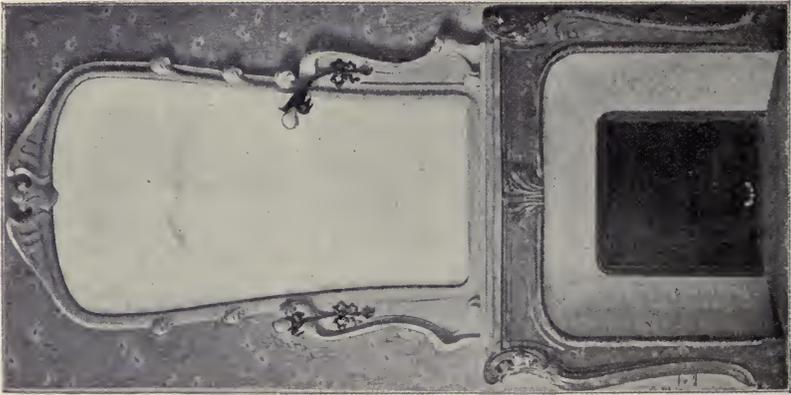
No. 4 AVENUE D' JENA.
(Mantlepiece.)



No. 4 AVENUE D' JENA.
(Mantlepiece.)



No. 4 AVENUE D' JENA.
(Mantlepiece.)



No. 4 AVENUE D' JENA.
(Mantlepiece.)

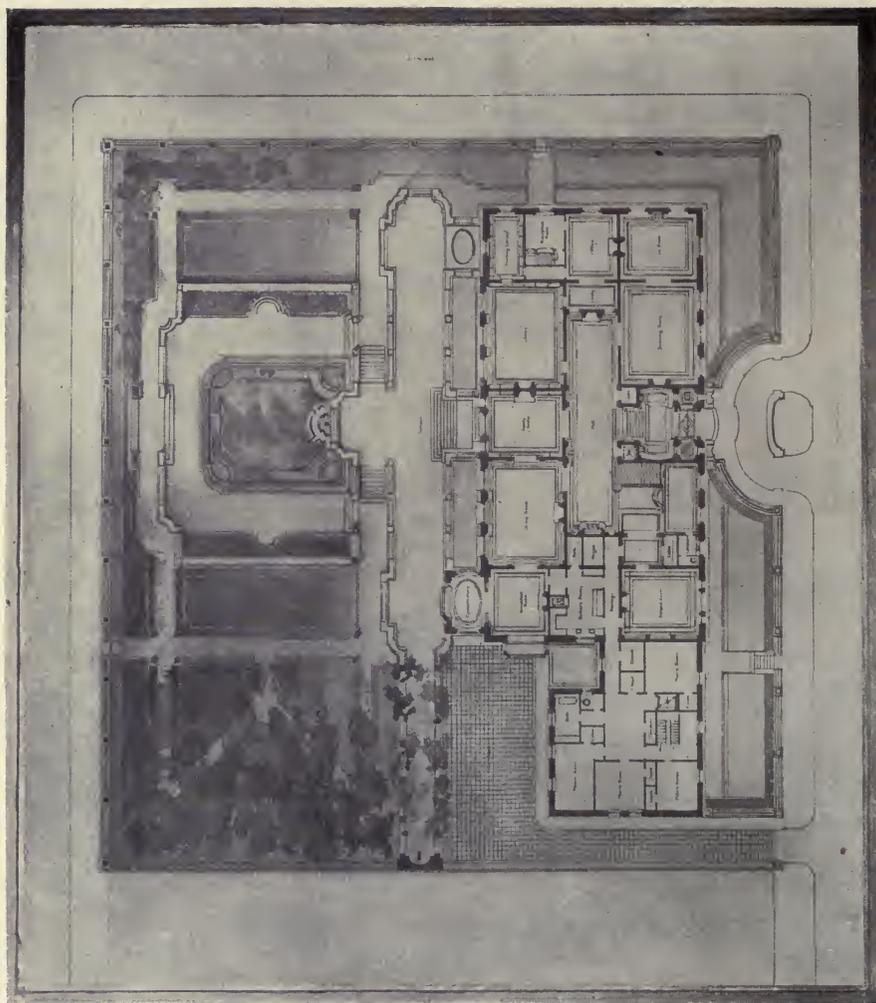


Carnegie Residence

Fifth Avenue, New York City.

Note.—These illustrations show the elevations of the competitive drawings, which have been modified in many particulars since the work was committed to the architects.—Ed. A. R.

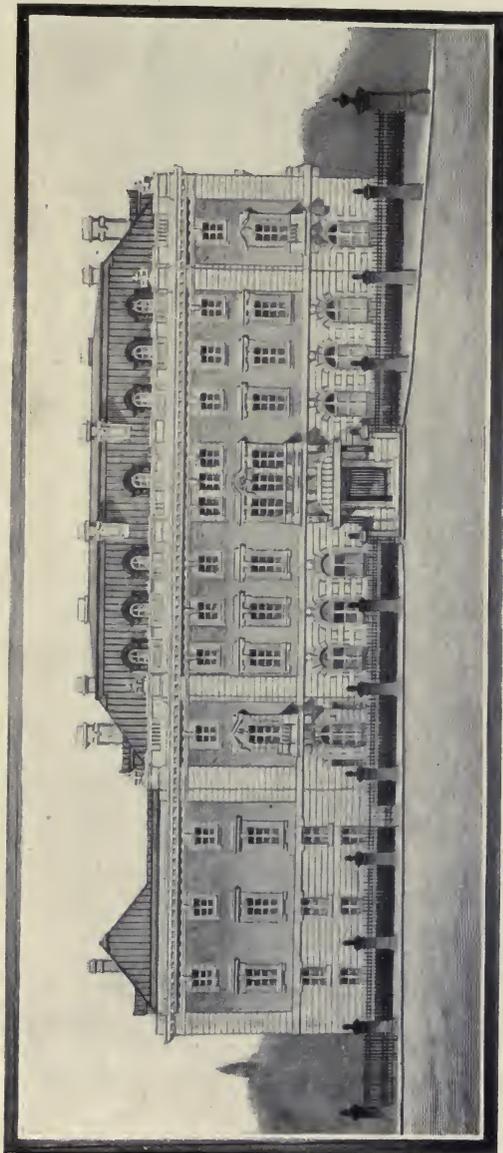
Babb, Cook & Willard, Architects.



PLAN OF FIRST STORY OF CARNEGIE RESIDENCE.

Fifth Avenue, 90th and 91st Streets, N. Y. City.

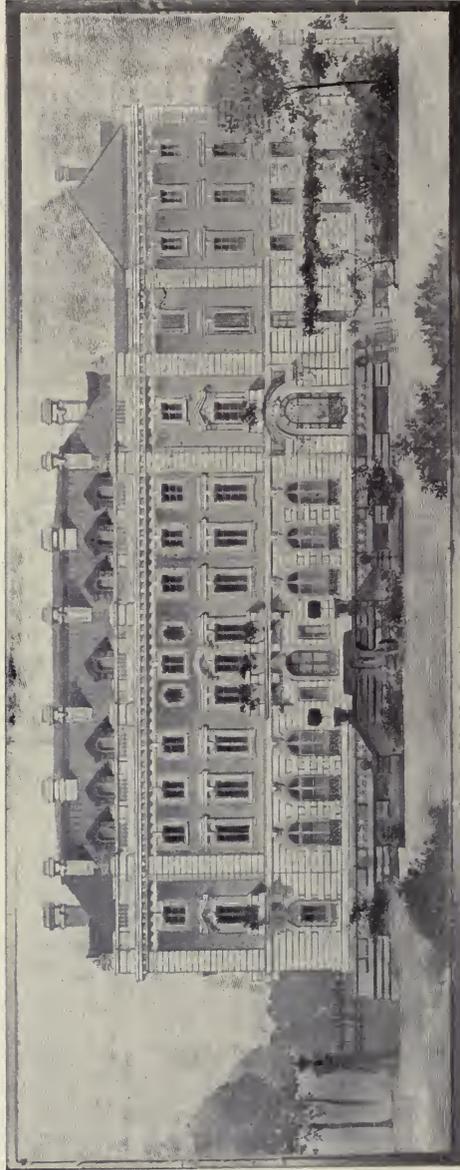
Babb, Cook & Willard, Architects.



NORTH ELEVATION, CARNEGIE RESIDENCE.

Fifth Avenue, 90th and 91st Streets, N. Y. City.

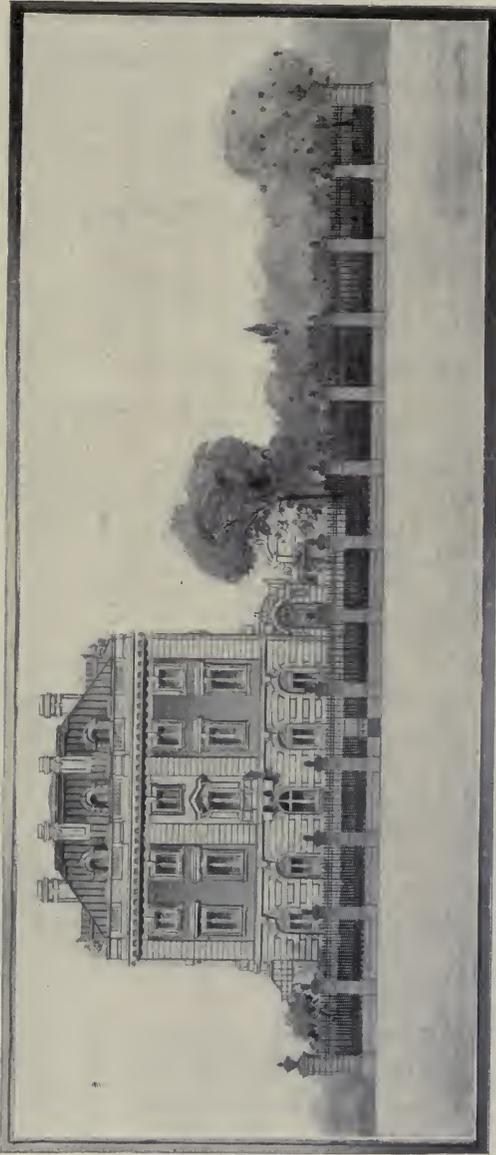
Babb, Cook & Willard, Architects.



SOUTH ELEVATION, CARNEGIE RESIDENCE.

Fifth Avenue, 90th and 91st Streets, N. Y. City.

Babb, Cook & Willard, Architects.



Fifth Avenue, 90th and 91st Streets, N. Y. City.

Babb, Cook & Willard, Architects.

HORIZONTAL CURVES IN COLUMBIA UNIVERSITY.

I.

IN their designs for the Columbia University Library and University Hall, Messrs. McKim, Mead & White are probably the first among modern architects to make the experiment of using the Greek horizontal curves on an extended scale. With one interesting exception in Boston, in the work of Mr. C. H. Blackall, to be mentioned later, it appears likely that the Columbia University buildings are absolutely the first modern structures to which the Greek horizontal curves are applied.

Mr. George Oakley Totten, Jr., of Washington, was the first to advise me of the curves of the Columbia University buildings. He considered it highly improbable that they could be due to any cause but intention, and this was my own view after inspection. But the imputation of discovering curves in the art of the Middle Ages, which were not intended, has been occasionally laid to the charge of the writer, and it seemed wise to forestall such a disaster, inside the limits of modern work and of New York City, by a letter of inquiry to the firm. The quotation below gives the substance of the answer received, which was most politely illustrated by complete prints of all the original plans on which the curves were laid down:

* * * "We beg to say that the curves to the steps and South Court of Columbia University were intentional, and were intended to counteract the apparent deflection in horizontal surfaces and lines of great extent.

"The curves are arcs of circles, that of the lower flight of steps having a rise of eight inches in the centre.

"It was not our purpose to make the curves perceptible without a close examination; but, on the other hand, should there appear to be a slight upward tendency, we should consider it beneficial, as conducing, with other causes, to draw the eye towards the Library, as the centre of interest. In general, we may say that it was the intention that the curvature be felt rather than apprehended, as in the Parthenon and other classic buildings.

"We send herewith, prints of the South Court in front of the Library, and of the University Building behind it, with the lengths and rises marked thereon. In the University Building, the curve will reappear in the lines of the entablature of the finished building.

"Yours truly,

"McKim, Mead & White."

In the general view of the Columbia University Library from 116th street (Fig. 1), we see next the street sidewalk a portion of the

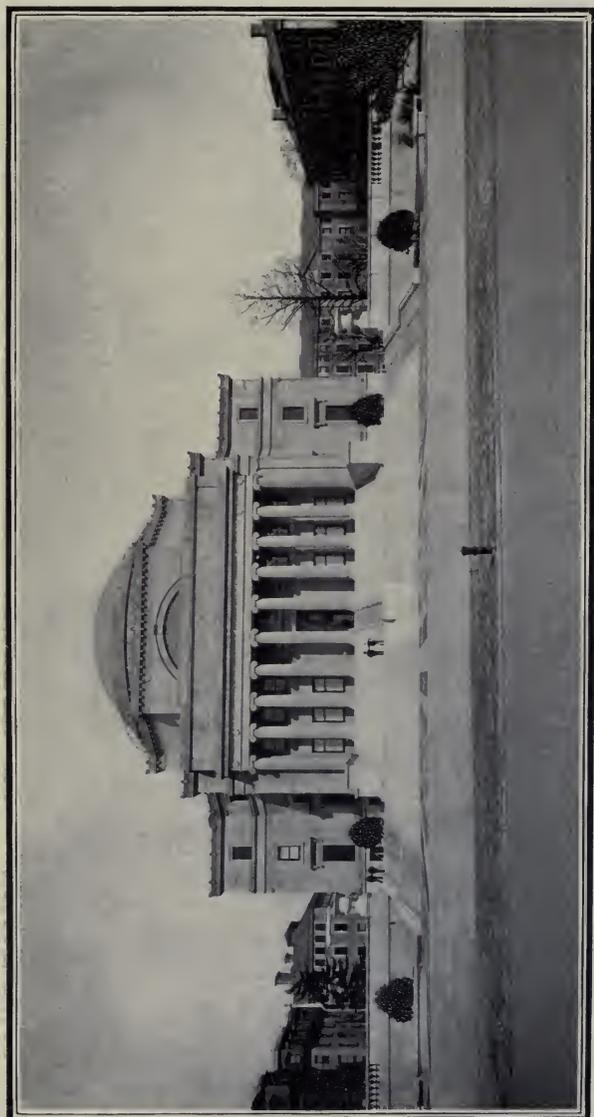


FIG. 1.—THE LIBRARY—COLUMBIA UNIVERSITY.
McKim, Mead & White, Architects.

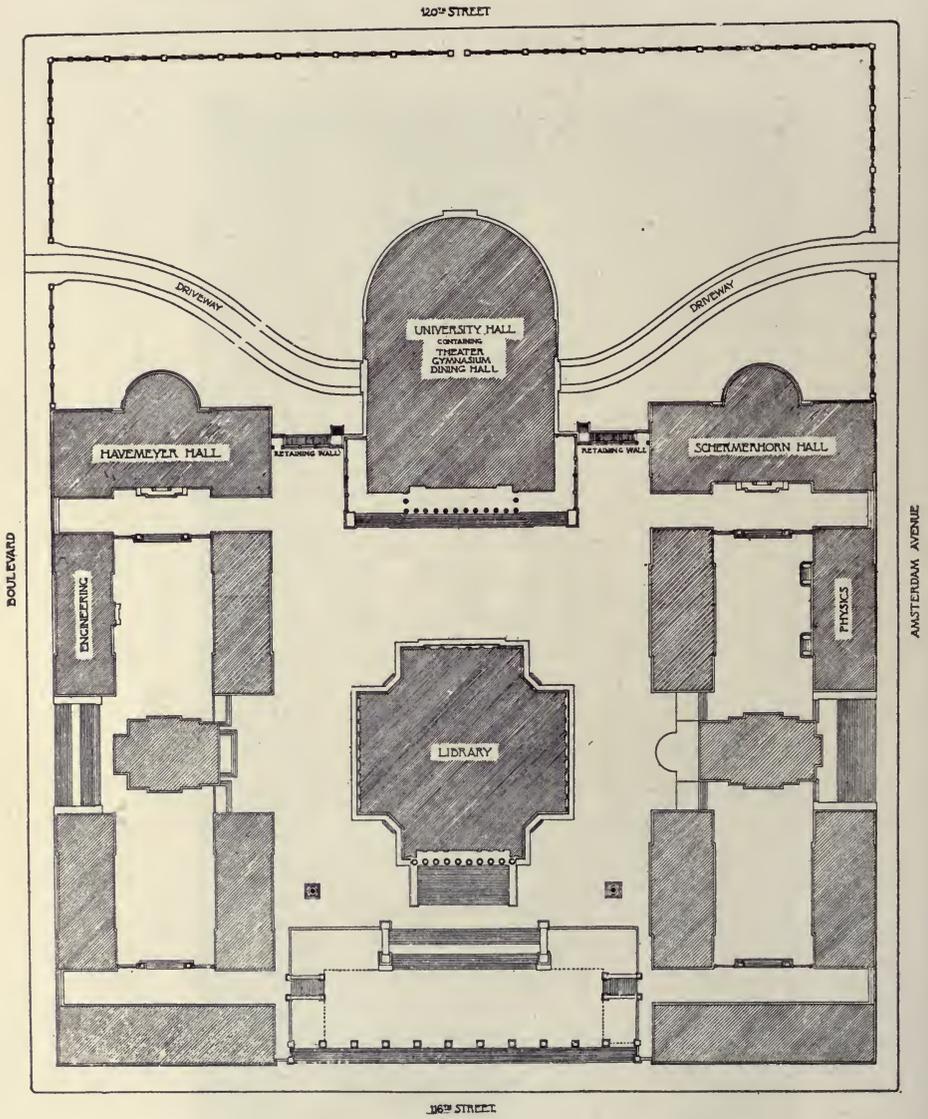


FIG. 2.—PLAN OF COLUMBIA UNIVERSITY.

McKim, Mead & White, Architects.

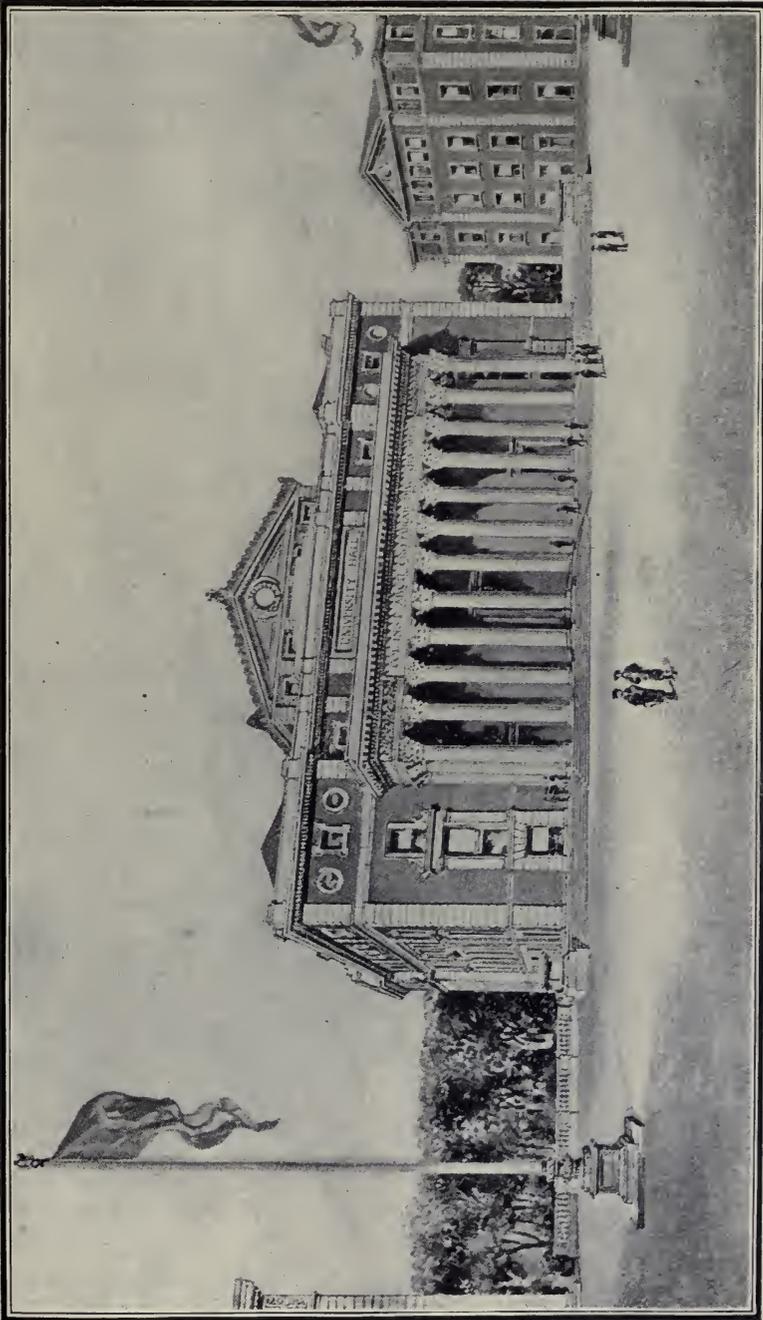


FIG. 3.—UNIVERSITY HALL—COLUMBIA UNIVERSITY.

McKim, Mead & White, Architects.

long line of steps forming the approach to the South Court. (Compare the ground-plan, Fig. 2.) These steps are all built with a curve in elevation; of 8 inches in a whole length of 327 feet. The entire platform of the South Court curves in a corresponding line from East to West, i. e., in a direction corresponding to that of the steps. From North to South, i. e., in the line from the street to the library, the South Court is built with a very pronounced but not especially noticeable upward slope toward the steps leading up to the Library. Beyond this Court the first of the two flights seen in Fig. 1 has a rising curve in elevation of $3\frac{1}{2}$ inches in a whole length of 134 feet, and the second and narrower flight, rising to the colonnade of the Library and including its platform, has a curve of corresponding delicacy. No curve has been applied to the entablature, but on account of the greater length of the colonnade of University Hall (not yet built) its entablature will also have the curve. So far, only the platform and substructure of this building have been completed. Here, the steps directly in front of the portico and its platform have rising curves in elevation of $2\frac{1}{2}$ inches in a whole length of 107 feet; to be repeated above as observed.

An interview with a representative of Messrs. McKim, Mead & White is authority for the advice that this upper curve is considered a necessary consequence of the curving platform on which the columns are to stand, as the central columns would otherwise be shorter than the outer columns in a too conspicuous degree. It is to be very carefully noted that the illustration of University Hall (Fig. 3) represents a building which has not yet been erected above the level of the platform, and that the curve of this platform and of the steps which rise to it is confined to the length and extent of the colonnade. At the angles of the portico the step line breaks backward and is thence carried on with straight horizontal lines to the angles of the building. The gentleman interviewed is also authority for the statement that the Greek refinement of horizontal curving lines gave the suggestion for the introduction of this refinement in these buildings. The amusing experience has been made that several gentlemen have directed the attention of the firm to the said curves as a defect of construction, or as an accidental occurrence of which the firm was ignorant, and they are explained by one of the guardians of the University grounds as an expedient for carrying off the rain.

II.

During the early part of our century, when copies of Greek temples and Greek porticoes were very widely built, and when they were, aside from traditional Renaissance forms, the exclusive and only admitted style of ornamental architecture, the discovery of the Greek

temple curves had not been made and the experiment of using them in the modern copies was consequently not dreamed of. This experiment seems, therefore, to call for serious comment and widespread recognition. The only parallel known to the writer is found in the work of Mr. C. H. Blackall, of Boston, and the following letter from Mr. Blackall will show what this parallel is:

"Dear Mr. Goodyear: The building to which I referred in conversation with you was Tremont Temple, which was built by me in conjunction with Mr. Geo. F. Newton, with whom I had a partnership under the firm name of Blackall & Newton, during the greater portion of the time of the construction of the building. I enclose herewith a photo-print which, while not a particularly good photograph, will illustrate in a measure the necessity which I felt existed. You will notice that the façade is divided into three distinct portions; the lower part, which corresponds to the stores and entrances to the building proper, the central portion marked by a plain diapered wall surface corresponding to the large auditorium, and the upper portion which corresponds to the superimposed office building. * * * The plain wall surface is crowned by a level string course, and the whole building is capped by a low pediment. Our feeling was that the horizontal line of the belt course beneath the crowning colonnade, also the lines of the pediment, would look out of level and depressed in the middle unless these lines were slightly crowned, and we, accordingly, attempted to arrange for having all of these crowned on a slight curve with a rise of, if I remember rightly, about 4 inches in the center, the total width being 91 feet. This would be sufficient to correct the apparent concavity of the line and would have given the appearance of being absolutely level. Unfortunately, we found this involved much change and expense, necessitating that each piece of the terra-cotta, very nearly, should be made on a different bevel, and the builder interposed many practical objections, not the least of which was the delay in completing the building. We were therefore obliged to abandon the plan, very much to our regret. An inspection of the photograph which I send you will show that the lines have the appearance of sagging, and every time I look at the building I regret that we were not able to at least try the experiment. I certainly shall attempt it, if an opportunity comes within my grasp.

"I wish to state further that in the construction of a warehouse in this city some years ago I was enabled to crown slightly a long stone belt which was immediately over a row of columns in the first story. The crowning started accidentally by the settlement of an end column but I continued it purposely, and though the crowning is very slight, I think only about $1\frac{1}{2}$ or 2 inches in a front of over 70 feet, it is sufficient to entirely counteract the sagged appearance which is so common with a long horizontal line. This is a warehouse on Purchase street.

"Yours very truly,

"C. H. Blackall."

The illustration of the new Tremont Temple kindly sent with this letter fully corroborates its remark that the gable gives a sagged ef-

fect to the line beneath it, and this downward deflection of a line beneath a gable is the most generally recognized of all optical illusions. But Mr. Blackall's letter contains another passage of still greater interest, relating to a line with which no gable interferes. This reference to a "sagged appearance which is so common with a long horizontal line" duplicates and repeats the observation in the letter from Messrs. McKim, Mead & White, that the curves of Columbia University "were designed to counteract the apparent deflection in horizontal lines and surfaces of great extent." Such personal observations on the part of practicing modern architects are a most valuable addition to those which have been made by archaeological writers on the theory of Greek curves, none of whom mention any such general appearance in straight lines.

Our one solitary surviving reference to ancient curves by an ancient writer is the celebrated prescription of Vitruvius directing the construction of curves in an *elevated* stylobate, which gives the explanation that its lines would otherwise be "alveolated" or depressed at the centre. Only one modern optical expert* has attempted an explanation of the reasons why both the stylobate and upper flank lines of a temple should be thus affected, but this tentative explanation does not include the observation that horizontal lines are so deflected under other conditions.. Penrose, who is practically the only English authority on the subject, has wholly ignored the explanation of Vitruvius, and has moved from the modern observation that a gable deflects the straight line beneath it, to the theory that the Greek curves began with the correction under the gable and that the upper flank lines were an afterthought—thus assuming the stylobate curves to be the final afterthought or necessary corollary of the upper curves, whereas Vitruvius conceives the stylobate to be the point of departure in the matter of explanation. The most important passage among the brief remarks of Penrose in the line of explanatory comment is one which conceives of motives for the curves on the temple flanks which are wholly apart from purely corrective purposes. Penrose expressly says of these side curves:

"We may attribute the use of this refinement to the feeling of a greater appearance of strength imparted by it, to the appreciation of beauty in a curved line, and to the experience of a want of harmony between the convex stylobates and architraves of the front and the straight line used in the flanks of the earliest temples."

To mention still other modern writers who have slighted the explanation of Vitruvius we come next to the name of Burnouf. Burnouf has also evolved a modern theory from a modern observation

*Thiersch. *Optische Täuschungen auf dem Gebiete der Architectur*; in the *Zeitschrift für Bauwesen*. Vol. XXIII., Ernst & Korn, Berlin, 1873.

which has no special reference to the stylobate, and which supposes the Greeks to have corrected effects of concavity due to the influence of the horizon (in the case of the Parthenon) and due to the spherical appearance of the sky.*

Finally, we have the modern writers like Jacob Burckhardt and Schnaase, who have ignored both the corrective explanation of Vitruvius and the corrective explanations of modern optical experts in favor of an æsthetic preference on the part of the Greeks for delicately curved lines as æsthetically preferable to straight ones. It will be noticed that Penrose has advanced both classes of explanations for different cases.

We thus see that a number of modern writers who differ more or less among themselves unite in slighting the explanation of Vitruvius, sometimes by implication and sometimes as in the case of Boutmy by direct assault. (See *Le Parthénon et la Génie Grec.*) Boutmy has most palpably given voice to the feeling common to those who have ignored Vitruvius, viz.: that his directions were borrowed from Greek authors whom he had imperfectly understood or that among various explanations he had chosen the one which best accorded with the matter-of-fact and utilitarian point of view of the Roman, as opposed to the more artistic temperament of the Greek, overlooking other æsthetic explanations of greater importance and wider application.

The revived use of horizontal curves in actual modern buildings enables us to add to these various opinions of archaeologists and of experts, debating the problematical purposes and views of the ancients, the more valuable testimony and authority of practising modern architects as to their own feelings and experience about modern construction. The remark of Mr. Blackall about "the sagged appearance of a long horizontal line," therefore, tempted me to draw him into farther correspondence. A second letter from him contained the interesting remark that:

"In case of a flight of steps I should perceptibly bow them from preference."

This was such a striking corroboration of the feeling which had found expression in the Columbia University buildings, to which no allusion had been made by my letter, that a third letter was addressed to Mr. Blackall. This letter mentioned the Columbia University buildings, and its purport is otherwise apparent in the answer given below:

**Revue de l'Architecture* for 1875, p. 146.

Boston, June 16, 1898.

"Dear Mr. Goodyear:

"In reply to your two questions in regard to bowing a flight of steps: (a) I cannot recall a single flight of steps that is bowed horizontally.* The other day at Albany I was interested in noticing the large exterior stairway which leads directly up to the centre of the Capitol building. These steps are broken up into several flights, one of which, the central flight, is slightly bowed outward in plan. Looking up at the steps from below, this bowing out, which is I should think not more than 3 inches in a width of about 50 feet, does have a slight corrective effect and it certainly helps to keep the whole flight from looking hollowed in, in plan.

"(b) My reason for perceptibly bowing a flight of steps would be simply because I have never seen a flight of steps which was dead level which did not look depressed in the centre. This is exactly the reason which actuated the old Greeks, as far as I understand the subject. Also, a straight line is not as pleasant to the eye as a curve, and the bowing not only obviates the appearance of sagging in the centre, but it also by its optical perspective makes the steps themselves seem wider.

"I should add to the answer to first of your questions that I have noticed the steps to which you refer on the front of the Columbia College Library.

"The effect of sagged lines, which my reason and sometimes my observation have told me were perfectly true, is very often noticeable in interiors. Last Thursday I was at the Mountain House, in the Catskills. I happened to meet the original proprietor, who has been there since 1845. He took me into the big parlor or ball-room and took a great deal of pride in explaining how he had crowned the whole ceiling in order to prevent the appearance of sagging. I consider this quite essential in a large room, especially if prominent girders are crossing it, and in every such case, if it could be worked in, I should try to curve all the lines slightly. Of course this is entirely experimental, and I should have nothing to guide me as to the exact amount of curvature and I would probably make mistakes; but I think mistakes would be more apt to come from a level ceiling than from one which is curved too much. I do not believe that carpenters crown their floor beams from any other reason than to prevent an actual sag, but when it comes to a ceiling, I quite agree with the Catskill Mountain House proprietor that the centre ought to be decidedly higher than the sides or it will look wrong.

"You are perfectly at liberty to quote me in any way which you see fit. I should be interested in knowing what other people have made up their minds to regarding such subjects. Perhaps I haven't expressed myself quite rightly. I do not feel a desire for a curve in horizontal lines, considered as a curve, but rather as a corrective of the depressing, dead appearance of an absolutely level or, for that matter, vertical line.

"Yours very truly,

"C. H. Blackall."

*i. e., excepting the Columbia University Buildings as subsequently specified.

The final sentence of Mr. Blackall's letter is so comprehensive that nothing could be added to it from the standpoint of the expert. But it suggests some reflections as to the present and future attitude of the public of intelligent laymen on whom all artists are so dependent for encouragement and support.

We are reaching a point, but have not reached it very long since, in which the knowledge that the Greeks curved their horizontal temple lines is becoming diffused among the educated public; but chance conversation with members of this public will reveal the general impression that these lines were curved in order to make them appear straight. This explanation is simple, is matter of fact, is easily remembered and exactly accords with the previous prejudice of the intelligent layman that the lines of a Greek temple ought to be straight. But the intelligent layman ought to be warned why the artistic sense objects to a sagging line. This is not due to an æsthetic preference for mathematically straight lines, but to the appearance of weakness in a building whose lines sag. Conversely it holds that the delicate upward curves of the Greek temples tend not only to correct effects of sagging but also positively tend to contribute to an appearance of vital strength and elasticity about the building.

In face of the classic buildings of Washington we do not so much rebel against an effect of sagging lines, as we rebel against the insufferable coldness and monotony of the general effect. In face of the Neptune temple at Pæstum the eye does not weary of looking at it, but it is not likely that this is because the horizontal lines appear exactly straight. In face of a classic portico at Washington the eye is bored, but it is not likely that this is because the main horizontals appear to sag. The fact is that no consideration of the distinctions between ancient and modern classic architecture is satisfactory which stops at the curves. We ought rather to include in one view all the refinements, i. e., leaning verticals, deviations from the parallel, irregular incolumnations, and irregular dimensions of all kinds. It is true that most of these things have been disposed of by Penrose as correctives, but it is also true that Mr. Penrose has in express terms called attention to the "dryness" of modern copies of Greek temples as due to the absence of these irregularities. By some other writers all these facts have been treated as positive rather than negative refinements, but their existence has been greatly ignored in favor of the curves, and they are almost totally unknown to the intelligent layman.

It is believed that a more general familiarity with all the Greek deviations from mathematical regularity, considered in mass, will minimize the tendency of the general public to treat the Greek curves as exclusively corrective expedients. The point of view which is so generally accepted for the entasis seems to apply equally well to the horizontal curves. The entasis is recognized not only as a corrective

to an appearance of concavity in a column but as a positive and perceptible addition to the delicacy, vigor and beauty of its outlines. There is no reason why the views of so many Continental writers on the æsthetics of Greek architecture, which take a similar attitude to the horizontal curves, should not have a wider circulation and more general recognition. We bear especially in thought at this moment the remarks of Jacob Burckhardt, in his world-famed "Cicerone," on the curves of Pæstum, as "expressions of the same feeling which demanded the entasis of the column and which sought everywhere to manifest the pulse beat of interior life (*Pulschlag inneren Lebens*), even in apparently mathematical forms."

But above all, let us come back to the utterance of the man who alone has thoroughly measured the Greek curves and whose book on the "Principles of Athenian Architecture" will infallibly remain for all future time the classic authority for the existence of the Greek irregularities. Penrose is undoubtedly indirectly responsible for the notion of the intelligent layman that the Greeks curved their lines in order to make them appear straight. Out of a number of explanations the intelligent layman has seized on the one which he could best understand and most easily repeat, and this is the explanation of the correction of the gable illusion, reduced to simple terms, and leaving out the mention of the gable. But Penrose has also said, and it may be well to quote him twice for the flanks of the temple.

"We may attribute the use of this refinement to the feeling of a greater appearance of strength imparted by it (and) to the appreciation of beauty inherent in a curved line."

The above reflections and quotations are inspired by the very remarkable revival of the Greek curves in the Columbia University buildings. Artists are notoriously prone to work from feeling, rather than from definite abstract principles or theories, but the public is prone to quote the easiest practical explanation out of a number which may be offered, and to lose sight of other explanations which are vitally allied to the feeling of the artist, but not so easily expressed in words. As long as only the buildings of the ancients are in question the purpose of their curves will naturally be debated only by the archæologists. As soon as modern buildings are in question it is important that the standpoint of the artist should not be obscured by the very prejudice against which he is really taking his stand, viz.: that mathematically straight lines are the only tolerable ones in architecture. This discrimination is all the more important because horizontal curves must, in the nature of the case, be an infrequent and unusual resort in the work of the modern architect, whereas other deviations from mathematical formalism are more easily practiced and may very probably become an habitual and constant feature in

modern buildings—provided the public taste which calls for and approves such deviations, be cultivated and encouraged by a proper study of the works of the ancients.

In case the innovation of Messrs. McKim, Mead and White should find would-be followers, these may be glad to be referred to the simple and inexpensive method of building horizontal curves in elevation which is described by Burnouf. The article in the *Revue de l'Architecture*, 1875, p. 146, is easily accessible in architectural libraries. The description of this method undoubtedly settles the long contention about the *scamili impares* which are mentioned by Vitruvius as the means of constructing the curves. To Burnouf alone, of all modern writers on the passage, belongs the credit of a clearly true and simple explanation of this passage and of the simple mechanical expedient by which curves in elevation may be constructed without great difficulty or expense, but we are not familiar with a single other writer who has adopted, or even mentioned, the solution of Burnouf. This becomes highly important, on account of the cost, as soon as the modern construction of curves is attempted. It would not, however, apply to the difficulties involved in the use of terra-cotta, which are mentioned by Mr. Blackall.

It need hardly be said that the use of the curves in the Columbia University buildings has no exact counterpart in Greek architecture. As far as we are advised at present, curves were not applied to flights of steps apart from buildings, as in the first two flights of steps approaching the Library. Nor were they used in porticoes which were adjuncts of other buildings which in themselves have no relation to the Greek temple form, as here in both cases. Nor have we any advice of a curving stylobate whose line was not repeated in the entablature. This is the case with the Library, but will not be the case in University Hall. These points of distinction are natural results of the difference between the old Greek temples and modern buildings.

Wm. H. Goodyear.



VESTIBULE IN RESIDENCE NO. 90 AVENUE HENRI-MARTIN.
Paris, France. M. F. Vignuelle, Architect.



SALOME.
(Bronze.)

Louis Convers.

(Revue des Arts Decoratifs.)



LA PERVERSITE.

L. Chalon.

(Revue des Arts Decoratifs.)